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THE

RETROSPECT

OF

PRACTICAL MEDICINE AND SURGERY,

BEING A

HALF-YEARLY JOURNAL,

CONTAINING A RETROSPECTIVE VIEW OF EVERY DISCOVERY AND PRACTICAL IMPROVEMENT IN THE MEDICAL SCIENCES.

EDITED BY

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SURGEON TO THE LEEDS GENERAL EYE AND EAR INFIRMARY; AND LECTURER ON MIDWIFERY, AND THE DISEASES OF WOMEN AND CHILDREN, IN THE LEEDS SCHOOL OF MEDICINE.

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PREFACE.

The increasing number of Medical Journals renders such a work as this inereasingly desirable to the busy practitioner. He will here find condensed almost every practical improvement and useful discovery which have been published in the numerous Medical Journals of Great Britain, America, France, and Germany; and in the daily perusal of these numerous sourees of information, at first undertaken as an amusement as well as for professional improvement, but now more as a matter of business, the Editor cannot but cordially coincide with a remark once made by one of our most eelebrated journalists, that "The multiplicity of subjects with which the mind of a medical man, who attempts to keep paee with the progress of his science, is constantly occupied, renders it desirable that ideas which are intended to be of praetical utility to him should be submitted to his grasp in the smallest compass and most defined form of which they are capable" : and the inereasing sale of this work proves that the above observation is truly agreed to by a numerous body of intelligent men.

From the increased size of the present volume, and from the additional expenee of French and German Journals, the Editor has thought himself warranted in inereasing the price of the work to a very small amount: and, moreover, as the sale of the work inereases, and other sourees of information are opened, the work can be afterwards inereased in size considerably, without any further increase of price, the additional sale making up for increase of expenee in eonducting the work.

In conelusion, the Editor begs once more to tender his best thanks to the different journalists from whom he has extraeted so much

valuable knowledge, and to the numerous practitioners who have so kindly supported him in his laborious undertaking; and he confidently trusts, by strict integrity and industry in his future compilations, that he will be still more encouraged to persevere in his labours.

Park Square, Leeds,
Dec 1841.

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PRACTICAL MEDICINE,

&c. &c.

Art. 1.—RECTIFICATIONS IN THE PRACTICE OF AUSCULTATION AND PERCUSSION.

By Dr. Joseph Skoda, Teacher of Clinical Medicine in the Hospital of Vienna.

(*Communicated by Dr. William Drysdale and Dr. John Russell.*)

[The following observations on Auscultation, extracted from the lectures of Dr. Skoda, of Vienna, by Dr. Drysdale and Dr. Russell, will be interesting to the English reader; as they place in a new light many facts which we have been accustomed to view differently. They have, moreover, been revised by Dr. Skoda himself.

All will acknowledge, that as the voice is produced in the larynx, it must invariably be transmitted thence to the different parts of the chest; and at first sight it would appear that the common opinion entertained by the profession is correct, namely, that its greater or less distinctness is owing to the good or bad conducting power of the parts lying betwixt the larynx and the parietes of the chest. The correctness of this opinion, however, is very doubtful. For example, in pneumonia, when there is hepatization of the lung, the voice is sometimes distinct, and at other times very indistinct, while percussion shows that no particular change has taken place.]

The cause of the occasional disappearance of the resonance of the voice is the obstruction by fluid matter of the bronchial tubes of the hepatized portion of the lung; for the resonance reappears readily when the patient makes a deep inspiration or coughs. This disappearance and return of the resonance, while in other essential particulars the hepatization remains the same,

does not accord with the commonly assigned cause; for, according to it, it would be a matter of indifference whether the bronchial tubes contained air or not. In pleuritic effusion into the cavity of the chest, the intensity of the resonance of the voice diminishes as the quantity of the exudation increases; while the contrary should happen if the increased distinctness of the voice at any stage of the effusion depended on the superior conducting power of the interposed fluid.

The question of the superiority in conducting power of dense over rare bodies, has been too much regarded as an abstract law, without paying sufficient attention to the particular circumstances which may modify or prevent its operation. It is quite true that dense bodies conduct the sound more readily than rare ones, but only if the sound be confined to the medium in which it is formed, for it passes with difficulty from one medium to another. For example, the slightest scratching at the end of a long pole is heard distinctly when the other end is placed in contact with the ear, while, if this be not done, (*i. e*, if the sound be transmitted by the air.) nothing at all is heard. The striking together of two stones under water, when the head is immersed, is distinctly heard, while no sound is audible when it is taken out. On the other hand, the human voice which is formed in the air, is heard furthest in that medium. When the head is dipped into water, sounds produced in the air are heard very faintly or not at all; and solid substances, as a board or a wall, interrupt sounds more or less completely. The laws of physics teach us further, that sound is more or less reflected in its transmission from a rare medium to a denser one, and that the new medium takes up less than would have been propagated in the same space had it remained in the medium by which it had been till then transmitted; and the less sound is taken up by the new medium, the greater the difference of consistence and coherence between the two media. The reason why enclosed passages and tubes whose walls are of solid materials conduct sounds better than the open air is, because they reflect the vibrations which are thus confined to a small space, and prevented from being dispersed and lost in the surrounding air. If the walls of the tube were instrumental in conducting the sound, it is singular that a hollow tube should be used as a stethoscope, and not a solid cylinder of wood or metal. The voice, therefore, reaches the parenchyma of the lungs, not

through the solid parts, but through the air in the trachea and bronchia, and ought to be carried further in the healthy lung, in which the air penetrates, into the air-cells, than in the hepatized lung, where the air-cells and smaller bronchia are obliterated. The vibrations, likewise, should pass more easily from the ear into the light tissue of the healthy lung than to the condensed parenchyma of the hepatized one, according to the law explained above.

A consideration of these facts would be almost sufficient in themselves to prevent us from acquiescing in the ordinary opinion, that the reason of the voice being louder when the lung is hepatized, than when it is sound and spongy, depends upon its being better conducted by the tissue of the lung when dense than when in its natural condition. Moreover, Dr. Skoda has set this matter at rest by the following simple experiment, which he usually performs in the presence of his class, and which any one may easily repeat.

If the ear be applied to a stethoscope placed successively on corresponding parts of a sound and then of a hepatized lung removed from the body, the voice of another person who speaks through a stethoscope placed upon the lung at an equal distance in both cases, will be heard somewhat more distinctly in the sound than in the hepatived lung: but the distinction is so insignificant that, were the reverse the case, it would not account for the very marked difference in such a condition of the lungs in the living subject.

Dr. Skoda explains the different degrees of strength of the voice in the chest by the law of consonance.

The fact that a sound can be heard, observes Dr. Skoda, as distinctly at a distance as at the place where it is produced can only be explained, either by its diffusion being prevented; and its being obliged to remain concentrated during its progress, or by its being reproduced in its course by means of consonance and thus increased. But if a sound be heard louder at a distance than at the place where it was originally formed, this must be by means of consonance alone.

Consonance is a term adopted by Dr. Skoda to express a well known phenomenon; and it may be here properly explained.

A tense guitar string sounds in unison with a note produced in its vicinity, either by another musical instrument or by the voice. A tuning fork held in the air emits a much weaker sound

than when placed upon a table or chest. The table or chest must increase the intensity of the sound, by assuming the same vibrations as the tuning fork, or, in other words, by consonating with it. The note of a Jew's harp is scarcely perceptible when it is struck in the air, and it is heard much more distinctly when played in the mouth. Thus the air in the mouth must increase the sound of the Jew's harp, *i. e.* must consonate with it.

It sometimes happens that the voice is heard more strongly at the thorax, than at the larynx, which in itself is sufficient to show that its strength is increased by means of consonance within the chest. The different degrees of the intensity of the voice heard at the thorax, may be explained by the different strength of the consonance within the chest. To ascertain these changes we must discover what it is within the chest that consonates with the voice, and by what circumstances the consonance is liable to be altered.

The voice as it issues from the mouth is composed of the sound formed at the larynx and the consonating sounds produced in the pharynx, mouth, and nasal cavities. This is shown by the alteration the voice undergoes by the shutting and opening of the nostrils and mouth, while there is no change made in the larynx. The pitch of the voice is evidently fixed by the larynx alone, and the opening and shutting of the nostrils and mouth has no influence upon it; the articulation of the voice, however, and its timbre depend upon the mouth and nostrils.

As it is certain that the air in the pharynx, mouth, and nostrils consonates with the sound formed in the larynx, there can be no doubt that the air in the trachea and bronchiæ may also be thrown into consonant fibrations with the sounds formed at the larynx. Hence it is the air in the chest and not the parenchyma of the lungs which consonates with the voice at the larynx, as the latter seems ill adapted for consonating, being neither stiff nor sufficiently tense. Those substances, such as air, tense strings, membranes, slips of wood, and thin plates in which a musical sound is most readily produced, are most easily thrown into consonant of vibrations.

Air can consonate only when confined within a circumscribed space. In the open air the human voice and every other sound is heard more feebly than in a room. The air confined within the box of a guitar, violin, piano, &c. consonates with the note struck on the strings, while the sound is not increased by the

consonance of the external air. The strength of the consonance depends upon the size and form of the space in which the air is confined, and upon the properties of the walls which bound the space. It appears that the consonating sound of the inclosed air will be stronger, the more perfectly the walls reflect the sounds which spread through the air. A space surrounded by solid walls produces the greatest consonance, while in a linen tent the sound is but little increased. The cause of the strengthening of sounds by the speaking-trumpet is well known.

The deductions drawn from the physical principles just referred to may be used in explaining the consonance of the voice in the chest. The air in the trachea and bronchia can consonate with the voice in as far as their walls resemble the walls of the larynx, mouth, and nasal cavities, in their power of reflecting sound. In the trachea, the walls of which consist of cartilage, the voice consonates almost as strongly as it sounds in the larynx. In the two branches also into which the trachea divides the consonance must be nearly as perfect. On the entrance of the bronchia into the parenchyma of the lung they have no longer cartilaginous rings, but merely, thin irregular plates of cartilage interspersed in the fibrous tissue. As the bronchia ramify, these plates become smaller, thinner, and less numerous, and at last disappear altogether, and the finest twigs of the bronchia consist merely of membranous canals. In the normal state of the parenchyma of the lung the air in the bronchia consonates less strongly with the voice than that in the trachea, in proportion to the smaller number of cartilages they contain. The conditions which increase the consonance of the voice in the air contained within the branches of the bronchia that ramify in the parenchyma of the lung are either that the walls of the bronchia have become cartilaginous or, if still membranous, very thick, or that the surrounding tissue of the lungs has become devoid of air;—in all these conditions the walls reflect the sound more strongly than the membranous walls of the normal bronchia;—and there must be no interruption of continuity between the air in the bronchia and that in the larynx. If the air in a confined space be thrown into either original or imported autophonous vibrations, which give rise to sound, the surrounding walls not unfrequently partake of the same vibrations, and they do this the more readily the less stiff and hard they are.

[In order to illustrate the above explanation, Dr. Skoda instituted a series of experiments. The lungs themselves were hardly adapted for these experiments, as after death the bronchial tubes are frequently found filled with fluid. Other tissues were therefore chosen, whose powers of reflecting sound resembled those of the healthy and the hepatized lung.]

In this respect a portion of the small intestine represents pretty well the more membranous parts of the bronchia, and a portion of the heart and liver the hepatized lung. If a person speak through a stethoscope placed on one end of a moderately inflated small intestine, consonant vibrations of the voice, in the air within the intestine may be heard by another person listening through a stethoscope placed on the other end of the intestine. If a layer of solid or fluid substance be interposed between the mouth of the stethoscope and the intestine, as, for example, a piece of liver or of intestine filled with water, the sound is heard very indistinctly, and not at all if the thickness of the interposed substance reaches half-an inch.

If a passage be bored in the liver, so as not completely to pierce it through, and this be spoken into by means of a stethoscope accurately fitted into the entrance of it, the voice may be heard along the whole length of the passage, and for a considerable distance on each side, through a stethoscope placed over it, so strong, that it by far exceeds in intensity the voice proceeding from the mouth of the speaker, which is heard by the free air.

Edinburgh Med. and and Surg. Journal, July, 1841, *p.* 89.

2.—ON COLCHICUM AUTUMNALE.

By Robert Lewins, Jun., M.D., &c.

[Few medicines, probably, have been prescribed by medical men in more variable doses than colchicum. While some have advised its exhibition in the largest doses, others have gone to the opposite extreme, and have been afraid of much smaller doses. Some of our most eminent men have prescribed the tincture of the seeds in drachm doses every three hours; others, as the late Dr. Duncan, in his dispensatory, have prescribed half ounce doses. Dr. Elliotson recommends half a drachm of the wine of the seeds three times a day, and in some cases he gives the same dose every eighth hour. Dr. Armstrong re-

commends one, and even two drachms, in twenty-four hours, and to be continued for some time. Dr. Barlow, of Bath, says, "It may be given in full doses so as to purge actively, or in divided doses frequently repeated. One drachm, one drachm and a half, or two drachms of the tincture of the seeds, should be administered at night, and repeated, if necessary, next morning. This quantity will generally purge briskly; but if it fail, another dose the following night will be pretty sure to succeed; at least so far as my experience goes, I have seldom found it necessary to exceed those doses."—*(Cyc. of Pract. Med: Art.—Gout.)* Dr. Lewins protests against these doses of the medicine, affirming that 170 minims is the maximum dose, in twenty-four hours, which his Father found it safe to administer.

It strikes us however, that there must have been some difference in the mode of preparation, or in the seeds themselves, in order to account for the great difference of opinion respecting the dose. Speaking of its administration Dr. Lewins says:]

From what I have observed I should conclude that there is most risk of danger from the violent action of any plant containing veratrine (and this is still more applicable to colchicia) in debilitated constitutions, particularly in individuals whose digestive organs are weakened by intemperance. This opinion I have repeatedly seen verified, and I am convinced that great caution is requisite in administering colchicum, when disease exists in any abdominal organ, as, from a comparatively small quantity being given in that condition of the system, intractable vomiting and purging are produced, accompanied by alarming depression of the vital powers. The following assertion of Dr. Stokes, in his work on the diagnosis and treatment of diseases of the Chest, in speaking of the tartrate of antimony, applies with even greater propriety to the exhibition of colchicum. "The more sthenic the disease, and greater the exemptions from complications especially with abdominal disease, the more safe and efficacious will be the remedy;" and the necessity of attending to these directions cannot be too strongly impressed on the minds of those who administer colchicum, as they involve a point of the utmost practical importance the neglect of which cannot fail to be followed by the most disastrous consequences.

[With respect to its modus operandi Dr. Lewins says:]

As surmised by physicians in all ages it is, I apprehend, by acting on the fluids, and especially on the blood, that we can really reach the *materies morbi* in arthritic and rheumatic affections. It were vain to advert to the erroneous opinions of the ancients, as to the peculiar morbid humours from which they conceived gout to arise; but the modern opinion of an excess of uric acid or of urea in the blood being, if not the proximate cause, at least mainly instrumental in constituting the disease, appears to be very probable, and to be confirmed by phenomena observed during its continuance, and by the effect of remedies which are efficacious in relieving it. In the present state of our knowledge, at least, we must, in considering the indications of cure, take into consideration all the elements obviously forming the constitutional and local affections present in gout, namely, vascular plethora, topical or general; gastric, hepatic, and intestinal derangement, as well as impaired and exhausted nervous energy; but a careful consideration of all the phenomena as they occur in gout, would, I humbly conceive, lead to the conclusion, that in this disease the fluids of the body are primarily affected; that, in short, gout is a disease of the blood, and that a vitiated condition of this vital fluid is the first link in the chain; and that the deranged state of the organic system of nerves and its consequences are merely secondary, and dependent on the former.

If this view of the pathology of gout be correct, we need be at no loss to account for the astonishing efficacy which colchicum possesses of relieving this disease, as we find, by the experiments of my esteemed friend, Professor Chelius of Heidelberg, that the quantity of uric acid execreted by the kidneys is nearly doubled in the course of twelve days under the use of this remedy.

[A very intelligent patient of Dr. Lewins' had long been sensible that the state of his health had long been connected in some way with the urinary discharge, and that he was always better when deposits took place in his urine, showing an increased separation of urea and other ingredients from the blood. This opinion is confirmed by Dr. Prout, in his admirable work "On the Nature and Treatment of Stomach and Urinary Diseases," He says:]

Whoever has attended much to urinary diseases must have remarked, that many individuals subject to derangements of the general health, seldom feel so well with respect to their health as when lithic acid deposits take place in the urine; and at page 227, he makes the following remarks :—We have said, that about the age of 40, the lithic acid may occasionally be considered as a sort of *materies morbi*, that is, the cause of irritation in the constitution, whatever it may be, is transferred to the kidneys, which are induced to secrete an extraordinary quantity of lithic acid, and thus to meliorate the system in general. On a similar principle, the good effects long ascribed to certain remedies of the active diuretic kind, may probably be explained: such remedies appearing to possess the power when given in favourable conditions of the system, of exciting the kidneys to separate large quantities of lithic acid; and in this way, by bringing about an artificial crisis, to produce great and immediate benefit. Thus Dr. Henry has mentioned cases in which *several ounces* of lithic acid were brought away in the course of a day or two by a remedy apparently composed of turpentine and laudanum chiefly.

[Dr. Lewins then goes on to say that]

From the powerful physiological effects which we have seen colchicum capable of producing, we might reasonably expect that it will be a powerful therapeutical agent in most diseases, where excessive excitement of the vascular and nervous system prevails; an opinion which has been entertained and insisted on by Mr. Want, Mr. Haden, my father, and others. The latter published in 1837, cases of continued fever, in illustration of his views as to the efficacy of *Cochicum Autumnale;* and concludes that, by its judicious administration, we may break the force of fever more effectually than by any other known means.

From my own experience, I am inclined to think well of the efficacy of colchicum in fever, and, as an example of the manner in which it may be used advantageously in that disease, I may record the following case.

Mrs. L., aged 26, at present pregnant, had attended her mother lately when in typhus fever; she shivered on the 18th December, was affected subsequently with head-ache, pain in the back and limbs, at present, (December 22nd) labouring

under all the symptoms of fever in an aggravated form, severe headache, great prostration of strength, heat of surface, tongue covered with a thick white fur, pulse 136; has taken several aperient pills with little effect.

℞. Vini. Sem. Colchici.; Vin Antimonii aa ʒ ii.; Spirit. Etheris Nitrosi ʒ ii.; Aq. Fontis ʒ iv. M. Sig. Two teaspoonsful immediately, and one every three hours afterwards.

[This case eventually did well, and Dr. Lewins proceeds to say:]

I venture not to decide whether the benefit which in this case and in many similar which have come under my observation, was derived from cochicum, is to be attributed merely to its action as a purgative and emetic; but I think it not unreasonable to suppose, that the effect which we have endeavoured to prove is produced by colchicum in the way of increasing the quantity of urea excreted by the kidneys, and of the bile by the liver, may afford an explanation of the satisfactory terminations of such cases. Certain it is, that in a fatal case of pure uncomplicated typhus which I witnessed very lately, and where the patient died comatose, with symptoms similar to those caused by suppression of urine, although this fluid was secreted in considerable quantity, on accurate examination, it was found to be very deficient in urea.

In a paper published in the Lancet, vol. i, for 1837-38, p. 198, by Mr. Tait, the author mentions that he has derived equally good effects from this remedy in scarlet fever. His cases were all of the purely inflammatory type,—blood-letting, leeches, and blisters being occasionally employed. He commenced with from twelve to fifteen drops of colchicum every three or four hours to robust farm-servants, and in children of from four to six years, he administered three or four drops, and diminished the dose, watching its effects, stopping whenever these were manifest. The pulse was diminished in frequency and force; the palpitation of the heart, which, in young subjects, was often perceptible to the eye, subsided; the inflammation and pain of the throat were alleviated, and the patient often expressed himself much better. Vomiting was excited in a few cases, but, as this seem always to be followed by an improvement in the state of the tonsils, and generally abated after the rejection of a quantity of bile, it was never found

necessary to interrupt the use of the medicine. The bowels were more or less purged, and the improvement was always so suddenly marked after a free discharge of dark bilious stools, that he always considered the patient out of danger when these appeared.

In addition to what I have said in regard to the probable manner in which colchicum acts beneficially in fever, I would suggest that, from what we have seen of its physiological action, the salutary influence may depend on its expelling from the circulating fluids, certain constituents by which they are contaminated or altered, in consequence of the impeded function or certain organs, in the early stage, and during its continuance, especially the kidneys and liver.

It is reasonable to infer, from the powerful influence which colchicum possesses in diminishing vascular and nervous excitement, and from its effects on the excretory organs of the body, and probably in the way of equalizing the circulation, that it may be useful in many local inflammations, both acute and chronic, so as to become a valuable auxiliary to the lancet; and in some instances entirely to supersede its use. So long ago as 1820, Mr. Haden published a work on this subject, in which he has related cases which prove, as we might have expected, the meadow-saffron to be a remedy possessed of great power in relieving such states of the system. He employed it principally in pulmonary and laryngeal inflammation with decided advantage; and in such cases, he seems almost entirely to have trusted to its effects, to the entire exclusion of blood-letting. Although I am not so sanguine as to expect that, in acute forms of such diseases, we can depend upon colchicum alone; yet, from what I have seen, I speak with confidence when I state that, with the exception of depletion, there is no remedy capable of producing more beneficial results; and in many subacute inflammations, more particularly the evacuations of blood, need be very limited in extent, if promptly followed by the judicious administration of colchicum. In pleurisy, pneumonia, bronchitis, and croup, I have seen most decided benefit result from its employment.

In proof of its efficacy in the last named disease, I adduce the following case without comment.

Novenmber 24th, 1840, at eight o'clock, A.M., A. G., aged, three and a half years, labours under decided symptoms of

croup, which have been coming on for the last forty-eight hours; pulse 180. Directed four leeches to be applied over the region of trachea, and four grains of calomel, to be divided into three doses, one of which was ordered to be given every third hour, and each dose to be followed by four drops of colchicum wine.

Five o'clock, P.M. Leeches bled well. All the calomel taken and sixteen drops of the colchicum wine. Has perspired freely: bowels once moved; symptoms of the disease somewhat mitigated; had retched several times; pulse 160. *Continuetur Vinum Sem Colchici.*

Eleven, P.M. Symptoms of the disease greatly alleviated; skin moist, but the perspiration less than at last visit; bowels have been freely moved: the evacuation resemble chopped spinage; pulse 116. *Intermit. medicamenta omnia.*

November 25, nine, A.M. Has had a tolerable night, and is to-day greatly relieved. Pulse has fallen to 100; very slight croupy sound perceptible during respiration. Expresses a desire for food. *Continuetur Vinum Colchici ut antea.*

Two, P.M. Continues to recover; several alvine evacuations have been passed since last report, which are less green in colour; pulse 96. *Intermit medic. omnia.* Gave particular directions to avoid exposure to cold, and to be kept on farinaceous diet.

Ten, P.M. Is free from complaint.

26th November, noon. Continues convalescent.

[It is remarkable that such a valuable medicine as colchicum autumnale should be almost unknown at Vienna, where Dr. Lewins resided for six months, and never knew the medicine once prescribed.]

Edinburgh Med. and Surg. Journal, July, 1841, *p.* 185—213.

3.—USE OF SECALE CORNUTUM.

By George Fyfe, M.D., Newcastle-upon-Tyne.

"To enter upon the consideration of the action of the ergot on the parturient uterus, or the very interesting and important question of its power to excite uterine action, is foreign to my present object; I shall therefore proceed at once to a statement of its efficacy as a medicine, and the diseases in which I deem it worthy of confidence. They are—polypus uteri, attended

with profuse hæmorrhage; menorrhagia, where there is no inordinate action of the heart or arteries, or morbid sensibility of the uterine system; in leucorrhœa, when independent of inflammatory action; in chlorosis with amenorrhœa; and in dysmenorrhœa: in all of which cases I have had numerous opportunities of ascertaining its efficiency.

The first time I saw it exhibited as a medicine was by my lamented friend, the late Mr. Parr, of this town, so long ago as the year 1828. It was in a case of very large polypus of the uterus, accompanied with frequent and frightful attacks of hæmorrhage. He gave the ergot after all ordinary treatment had proved unavailing. The effect produced was not only the moderation of the hæmorrhage, but also the expulsion of large and numerous masses of the tumor, in many of which a distinct fibrous structure was perceptible. After its continued employment, the woman, who had arrived at the climacteric period, enjoyed comparative health and comfort, being freed from the repeated and alarming hæmorrhages, and experiencing no inconvenience from the small portion of the tumor which, when last examined, still remained. To this case I owe the idea that it might be useful in others. How far this has been justified, he sequel must decide.

In menorrhagia, by which term I do not mean the mere increased menstrual discharge, I have found this medicine of the greatest value. In this disease, however, it is necessary to ponder well on the individual circumstances of each case, and to use the utmost caution in ascertaining the cause on which the disease depends; as where such precaution has been neglected, it has been my lot to see both the sufferings and danger aggravated by the ergot. In this respect it does not differ from other active medicines. The slightest reflection will suffice to call to mind the very different states of the system in which this disease occurs. It may, for example, happen in the most phlogistic and plethoric, or it may arise in a person of a diametrically opposite constitution. If given in the first state it is decidedly prejudicial, unless preceded by such means as are calculated to remove alike the plethora and morbid sensibility; and even when this has been done, its operation requires to be carefully observed. In the last it acts most beneficially, as it at once raises the nervous energy of the uterus, and through this medium probably imparts increased tone to the relaxed and

debilitated vessels from which the exhalation takes place. The following case affords a striking example of the utility of the medicine:—

In 1834, I was requested to visit a poor woman who had for many years led a most abandoned life, and who was apparently in a dying state from extreme exhaustion. Her age might be about thirty-four. On inquiry, I learnt that for the two preceding years she had suffered from repeated and severe hæmorrhages from the uterus, and that, on the present occasion, the discharge had continued for many days, until, when I saw her, though still abundant in quantity, it was not more coloured than the serum of healthy blood. In short, she seemed to be rapidly sinking. I ordered her immediately a full dose of the acetate of lead, with opium, to be repeated every four hours; and port wine or brandy, in sago, to be given frequently. Cold was applied, both externally and internally, by means of an injection of a strong solution of alum. For a brief space of time she appeared somewhat relieved; but in two or three days the hæmorrhage recurred with increased violence, the fluid also being more sanguineous. Having, in other cases, fancied that the ergot had been of use, I immediately gave her ʒss. of the powder, to be repeated in ℈i. doses every three or four hours. From the lapse of an hour after the first dose she experienced manifest relief; and on seeing her in the evening, I directed the third dose not to be given till the sixth hour, unless any recurrence of the discharge should render it necessary. Next day she continued better; and the medicine was directed to be taken only night and morning. From this visit she went on gradually improving, and for two years after, when I had occasion to prescribe for her, she had experienced no return of hæmorrhage. She appeared quite well in health, but completely blanched in colour. To this I might add several other cases, occurring in persons of asthenic constitution, in which similar good effects were derived from the ergot, but consider that it would only be a needless occupation of your columns, and your readers' time. It may be enough to say, that seven years of subsequent practice have confirmed my reliance on the ergot in such cases. Even where an opposite diathesis prevails it has been employed advantageously, combined with conium and hyoscyamus. In such persons it is advisable to premise a moderate abstraction of blood from the system, and to keep up

depletory action by means of saline cathartics. In these cases, however, the infusion of roses with sulphuric acid and digitalis, or alum, seem more appropriate.

In leucorrhœa it has been highly useful. In this disease, as in menorrhagia, it is necessary to ascertain the state of the system, more particularly the uterine disorder on which it depends; as where any degree of inflammation is present it will be injurious. In several distressing cases of this disease, where the strongest astringent injections had been employed without any effect, except exciting inflammatory action which did not previously exist, I have found the ergot, aided by injections of simple warm water, or the decoction of poppy capsules, perfectly successful. I may observe *en passant* that from considerable opportunities of observation, it is my firm belief that in a vast proportion of cases of leucorrhœa, stimulant and astringent injections are not only uncalled for, but absolutely contra-indicated; at the same time, it must be acknowledged that they are occasionally of great use.

In chlorosis and amenorrhœa I have frequently experienced the good effects of the ergot, after aloes, iron, valerian, cantharides, &c. had all been employed without the slightest advantage. In these cases, when extreme nervous susceptibility exists, it may be most advantageously combined with the valerian, and where the alvine system is torpid, with aloes. When aloes are employed, I attach the preference to the Barbadoes: in doing so I may be somewhat empirical, as it is difficult to account for the superiority of the Barbadoes over the socotrine, as an emenagogue, unless it be ascribed to the larger quantity of bitter principle contained in the former.

In dysmenorrhœa the ergot has been most useful. In one case, accompanied with what may without exaggeration be termed torture at each period, it appeared almost magical in its operation. It is right to state that it was given in combination with the valerian; which medicine, however, had been previously given, but without any apparent benefit. To enter into the detail of individual cases is not only tedious, but would also occupy too much of your valuable columns. I shall therefore endeavour, with the utmost possible brevity, to explain the apparent paradox of a medicine being of use in cases at first sight so pathologically opposite.

It is well known that the same cause operating on different constitutions will be followed by effects proportionately variable. This is a fact which does not admit of refutation, whether it be applied to man morally or physically. So then it is with regard to the uterine system, as every man of moderate experience will admit that the same morbid condition will, according to peculiarity of constitution, produce a very dissimilar train of symptoms. Thus, whilst a congested state of the uterine vessels will in one person lead to menorrhagia, the same cause operating on a different constitution will be attended with leucorrhœa. Again, when the nervous system of the uterus is at fault, we in one person have chorea, in another simple hysteria, in others cardiac and pulmonic symptoms, &c. This is especially true in regard to menorrhagia and leucorrhœa. These diseases may arise alike in the sthenic and asthenic diatheses, which must of course render a corresponding modification of our remedial measures necessary. Without using much discrimination, we aggravate rather than alleviate the suffering inseparable from disease, enrol ourselves under the banner of empiricism.

I have merely to add, that I consider myself fully justified in recommending the ergot as an excellent emenagogue and anti-hemorrhagic agent. Should this recommendation be followed by beneficial results in the hands of other professional men, I will regard myself as amply rewarded for the trouble of putting together the foregoing remarks, the correctness of which can only be proved by trials more extensive than private practice; besides which, every man is liable to view with *partiality* any plan of treatment, which, without authority, he adopts and finds successful.

The doses in which I have prescribed it have varied from gr. x. to ℈j. of the powder, ʒss. to ʒj. of the concentrated tincture. A good formula for decoction is given in Foot's Medical Almanack, although it appears to me that the quantity of ergot is rather small.

Med. Gazette, June 18, 1841, *p.* 497.

[The foregoing observations on this extraordinary medicine, are well worthy of the attention of medical men. Our own experience almost entirely accords with that of Dr. Fyfe. The ergot seems to be an extraordinary stimulant to the muscular tissue of the womb: indeed we have frequently seen this

stimulation extended to nearly the whole muscular system; and it seems to us that the perniciousness of this drug on the child during labour, consists in the uninterrupted contraction of the muscular fibres of the uterus, and the consequent interruption to the communication between the vessels of the mother going to supply the placenta, and the vessels of the child going to supply the same part.

To the same kind of action on the uterus may be attributed its good effects in other diseases mentioned by Dr. Fyfe, especially in menorrhagia dependent on a want of action in the uterine system, and in leucorrhœa, dependent likewise on debility. In menorrhagia, as well as in the continued discharge which often follows abortion, we have found this drug of inestimable value.]

4.——PROCESS FOR PREPARING A PURE AND CONCENTRATED WATERY SOLUTION OF OPIUM, FREE FROM NARCOTINE.

By Messrs. T. and H. Smith, Chemists, Edinburgh.

[Although many eminent practitioners entertain a poor opinion of the artificial salts of the active principles of opium, there is no donbt that their discovery is a most useful one. "Nevertheless," as the Messrs. Smith say, "the natural combination of morphia as it exists in crude opium, does and in all probability will continue to be preferred and used by a great proportion of medical men." And with this view these able chemists give us the following formula:]

Macerate for twenty-four hours any quantity of opium in as much water as will be sufficient to cover it completely, and press the solution through a cloth; digest again for the same time in a like quantity of water; again press out, and repeat the process exactly in the same manner, till the opium has been exposed to the action of seven waters, when it will be sufficiently exhausted. The waters are then to be evaporated to the consistence of a soft extract, the concentration being finished over the water bath, to prevent the active principle being injured by too great a heat. Take up the soluable parts with repeated portions of water, filter, and again evaporate with care to a syrupy consistence. Expose the syrupy extract to the influence of ether, for the purpose of removing the narcotine;

after the ether has become saturated, pour it off, and add fresh portions, till on evaporating a small quantity, no solid residuum is obtained. The extract now freed from narcotine is to be heated in a water bath to drive of the ether completely, and digested in alcohol till nothing soluble in that menstruum is left. A large quantity of inert matter will remain, which we have proved experimentally to be quite free from morphia. The alcohol must now be distilled off, and the residuum of distillation dissolved as completely as possible in cold distilled water; a farther portion of inactive pulverulent extractive matter will remain undissolved. The solution, after filtration is now to be set aside for two or three weeks, when a considerable quantity of solid matter will be found settled to the bottom, from which the liquid must be separated by filtration, and evaporated till about 12 oz. are left for every 4 oz. of opium used; filter, add $2\frac{3}{4}$ oz. of alcohol, and enough of distilled water to make 16 oz. The solution thus obtained, is of a much lighter colour than laudanum, and much more fluid; it is also quite free from anything nauseous in taste or smell, the taste being only slightly and not unpleasantly bitter, even in the undiluted state. It is also miscible without muddiness with watery and and spirituous liquids; but of course will be decomposed by all substances which act on the morphia salts, as it contains, if rightly prepared, the full quantity of that principle which an equivalent portion of crude opium would give. This we have proved by precipitating the morphia from the solution, and forming a muriate, when we obtained from a quantity equivalent to 4 oz. of opium, between 3 and 4 drachms of the salt, which was nearly white at the first crystalization, having only a slight fawn tinge, and was perfectly free from narcotine. One of us was as completely narcotized with eight drops of the solution as he would have been with about thirty drops of laudanum.

Although the solution is so much freed from principles subject to decomposition, it will be found necessary to add the proportion of alcohol recommended, as it will not keep unless this addition be made; its surface, if it be allowed to stand undisturbed for some weeks, beginning to exhibit some appearance of mould. The quantity of spirit added, however, forms so small a proportion, that the preparation may with perfect propriety be considered a watery solution of opium. An ordi-

nary dose does not contain more than about two drops of alcohol, a quantity so minute, that it is unnecessary to take it into account. We have also prepared a solution much more concentrated, by evaporating the pure liquid so far, that every 24 oz. shall contain the soluble narcotic principle of 16 oz. of opium; its dose is from three to five drops; its consistence is not much greater than that of laudanum, and it is transparent.

Lond. and Edin. Monthly Journal of Med. Science, Aug., 1841, *p.* 572.

5.—FURTHER OBSERVATIONS ON THE OXIDE OF SILVER.

By C. H. B. Lane, Esq., M.R.C.S.

[In article 75 of our second number, will be found a digest of Mr. Lane's interesting communication on this subject to the Medico Chirurgical Review for July, 1840. We need not, therefore, again enter minutely into his theory and practice with respect to this article. It will be sufficient to remind the reader that Mr. Lane's theory is that the *nitrate* of silver on being taken into the stomach, is converted into a chloride by the free hydrochloric acid of the gastric juice; this is taken up into the circulation, and when conveyed to the cutaneous surface, is converted into an *oxide* by the action of light and the strong affinity of albumen. This oxide cannot, apparently, permeate the capillaries, but becomes indelibly fixed, occasioning extreme disfigurement: but if the chemical process just described be *anticipated*, and the silver be primarily introduced into the stomach as an *oxide* instead of a *nitrate*, its transmission to the skin would probably be prevented: for since the cutaneous capillaries are not permeable to its egress when once deposited in the skin, as is the bile in jaundice, neither should we expect them to be permeable for its ingress. Mr. Lane, moreover, considers silver to be primarily a sedative, acting directly on the nervous fibre; and especially influencing the nerves of *organic* life which control the capillary circulation; while the action of lead is on the nerves of *animal* life—those of sensation and voluntary motion. Silver, moreover, acts on the uterine system, and especially in diseases where there is undue secretion and great irritation. Mr. Lane has now administered the oxide of silver for two months, at intervals, without the slightest tendency to discolouration, even though in one case repeated salivation was caused.

Dr. Golding Bird has given the same remedy for four months, without any bad effects. Mr. Lane enumerates several cases in which this remedy was efficacious; such as cardialgia and pyrosis, in which he gave half grain doses twice a-day—intestinal spasm, followed by nausea and pyrosis—gastrodynia—irritable state of the stomach, accompanied with gnawing and constant pain, and nausea, &c. In all these cases about a grain daily was administered, and were soon relieved; so soon, indeed, that we do not see any particular advantage in the oxide over the nitrate, as the dreaded discolouration never makes its appearance except under a tolerably long course of this powerful remedy. In cases where organic mischief exists, it is of no use. Dr. Bird found that in cases characterised by a glairy discharge from the stomach, which he considers analogous to the follicular gastric dyspepsia of Dr. Todd, it was of little use. Several cases of uterine hemorrhage, both in the unimpregnated and in the impregnated state, are given, in which success attended it. But in all or most of the cases related by Dr. Lane, we might have administered the nitrate with equal safety and efficacy. If he had given us cases of long duration, in which the long continued use of the nitrate would have been inadmissible, we should have seen some reason to have changed our old favourite remedy for the new one. However, there is no doubt that it may prove a valuable addition to our stock of remedies, and we therefore beg to recommend the careful perusal of Mr. Lane's papers to the profession.]

Lancet, July 10, 1841, *p.* 537—542.

On the use of the *chloride of silver* the following observations are made by Dr. Perry, resident Physician of the Philadelphia Hospital.]

It must be universally acknowledged, that the nitrate of silver administered by the mouth can never act as nitrate of silver on the system, since any dose which could be ventured upon must, immediately on entering the stomach, be converted into the chloride of silver, from the chloride of sodium of our food, or the hydrochloric acid of the gastric juice.

The chloride must then, à priori, be considered as efficacious equally with the nitrate, while it will be found less uncertain in its effects, more convenient for exhibition, less liable to decomposition, and free from its nauseous taste. It may be given,

too, in any dose thought necessary to produce the alterative and tonic action of silver without danger.

In less doses than thirty grains no irritating or manifest effects result. Thirty grains given at once will generally produce emesis. The best form of exhibition is in pill. To children it can be given as a powder suspended in syrup,

Twelve grains administered daily for three months have produced no unpleasant symptoms, and none of my numerous and long-continued courses of the remedy have been followed by discolouration of the skin.

In epilepsy, three grains, given four or five times daily, produced effects similar to those of nitrate of silver, but more marked.

In chronic dysentery, half a grain to three grains thrice daily produces immediate diminution in the number of stools, and tormina, with amelioration in the character of the stools and other symptoms.

I have not ventured to use it freely in acute dysentery, but in a few cases in which it has been administered, its effects seemed equally beneficial.

In chronic and colliquative diarrhœa, benefit was derived from its use in the same doses, but not so markedly, uniformly, or permanently.

The catamenia suspended for years have, without any adjuvant treatment, returned after its free exhibition for two or three weeks.

One case of secondary syphilis (the only one in which it has been tried) improved rapidly under it.

American Medical Library and Intelligencer, February, 1841—*British and Foreign Medical Review, October*, 1841, *p.* 567.

6.—POISONING BY LAUDANUM TREATED BY ELECTRICITY.

By C. H. B. Williams, M.D., Physician to University College Hospital, &c. &c.

[The following case, illustrative of the effects of electricity in rousing a patient from the dangerous and too frequently fatal sleep produced by a large dose of laudanum, is that of a young woman, aged 26, who swallowed an ounce and a half of this

liquid. Copious vomiting had however been effected by a scruple of the sulphate of zinc before the following treatment was adopted. The case is related as follows:—

On admission, she was in a state of complete coma; the pupils were contracted; the face pale; the lips livid; the pulse weak, and the respirations rare. The stomach-pump was immediately used; warm water first, and afterwards strong coffee, being injected and again drawn out, and electric shocks were passed across the shoulder by the electro-magnetic apparatus, with the effect of instantly restoring the patient to consciousness. She was then made to walk about the ward supported by two of the nurses, and the electric shocks were renewed at intervals as she became drowsy.

At two, P.M., Dr. Williams saw her, and ordered six grains of calomel immediately, and two minims of croton oil one hour afterwards; the oil to be repeated every hour until the bowels were moved. Her bowels were freely opened about six P.M., after she had taken three doses of the oil. From that time the drowsiness ceased. She remained perfectly well, and was discharged on the 18th.

In lecturing on this case, Dr. Williams remarked, that the first indication to be fulfilled in cases of poisoning by opium or its preparations, is the immediate evacuation of the poison from the stomach and intestines. The emptying of the stomach is more surely effected by the use of the stomach-pump than by any other means; and in proportion as the sympathies concerned in vomiting are more paralysed by the long operation of the poison, there would be the more need for the use of this mechanical substitute for the act of vomiting, inasmuch as the stomach would be less affected by emetics. In washing out the stomach by the stomach-pump, it is well to use infusion of coffee or green tea, which in a slight degree counteract the stupefying influence of the opium. When the stomach-pump is not at hand, then emetics, similar to that employed in the case under consideration, are most effective. The stomach having been emptied, the medical attendant should next endeavour to evacuate the intestines; and in doing this he should use purgatives best suited to counteract the constrictive influence which opium exerts over the excernent organs. For this purpose, calomel is found most beneficial, as it not only acts upon

the excretions, but removes the tendency to local congestions or inflammations, which very frequently follow poisoning by the agent under consideration. Such a result had ensued in one case lately in the hospital, in which, after the prolonged operation of a large dose of opium, a low kind of inflammation of the lungs ensued, which ended in extensive gangrene, and terminated fatally. The poison being thus evacuated, and as far as possibly counteracted, the still sinking excitability of the nervous system is to be roused as much as possible. Opium kills by producing asphyxia, which is consequent upon the general paralysis of both the voluntary and involuntary nerves which are engaged in the motions of respiration. Efforts to excite the muscles of respiration may be directed either to the voluntary or involuntary nerves which act in respiration. To arouse the patient to consciousness, and to the voluntary exertions connected with it, the patient may be kept walking about, or riding over a rough road; or some irritating agent, such as nettles, or the dolichos pruriens, may be applied to the skin. The involuntary motion of respiration dependent on reflex action are aroused by the cold affusion, stimulating vapours to the nostrils, or by electricity, which acts also directly on the muscles, and restores consciousness. The latter agent was the most powerful, because it excited all the functions concerned in the respiratory movements, involuntary and voluntary, and its efficacy had been proved in the present case. He thought that an objection existed against the use of forced exertions in cases of this description, which was not sufficiently thought of. By such general exercise, the respiration was doubtlessly kept up; but the need of respiration was increased likewise; the blood became more venous, and the demand on the weakened organs of respiration became greater. The object of keeping the patient awake was to make him conscious of that feeling of want of breath which prompts voluntary respiratory efforts, so that by those efforts the blood might be oxygenated, until the involuntary movements should be restored. Electricity had the advantage of exciting the motions wanted, without exhausting the strength and overtaxing the voluntary movements of respiration, as forced bodily exertion must do.

If the poison be much in quantity, or long taken, the nerves and muscles are insensible to any of the above-mentioned stimuli. We must then do for the lungs what by the stomach-

pump we do for the stomach; move them mechanically; use artificial respiration: and this is best done with Read's syringe and oxygen gas, if they are at hand. In such extreme cases there is so much congestion in the right side of the heart, that the pulse fails, and even artificial respiration is of no avail. Here venesection will sometimes relieve the congestion, and restore the motion.

With artificial respiration should be joined heat to the limbs, friction, &c.; and by these means life may be sometimes sustained until the action of the poison ceases, and the natural motions are restored. This was first shown by Sir B. Brodie's experiments with the woorara poison.

Lancet, July 31, 1841, *p.* 661.

7.—ON THE PROPAGATION OF THE VARIOLÆ VACCINÆ BY CRUSTS FROM THE COW.

By John Baron, M.D., F.R.S., Cheltenham.

[In Article 22 of our third volume we published the fact of crusts taken from the dried pustules after vaccination being a good way of preserving the lymph, and one which might be very useful when it was necessary to send it into warm climates. The propagation of the vaccine disease from the crusts has been attempted in India and other countries, but not with much success in England. The crusts, however, may be found to contain the virus in a state of purity, as may be seen by the following interesting case of Dr. Baron.]

On the 7th of this month my friend Mr. Coles informed me that he had heard of the existence of the variolæ vaccinæ at a farm a short distance from this place. The following morning we visited the cows. Only one had been afflicted by the complaint. The teats were covered with the remains of the disease, but not a single vesicle existed from which lymph could be taken. Under these circumstances I recommended Mr. Coles to collect a few crusts. This was done, and on the tenth of this month he triturated two of them with pure cold water, having previously separated the margin and outer layers of each crust, and with the fluid thus obtained he inoculated six children, with three punctures on each arm. Out of these thirty-six punctures only one took effect. The vesicle formed in this instance

was rather small, but very perfect in its form and character; so much so that no hesitation was felt about the propriety of attempting to propagate the disease from it. Mr. Coles accordingly used it on *two* children on the 17th, and *one* on the 19th, all of which succeeded. From one of these patients, vaccinated on the 17th, he vaccinated four on the 24th; and from that vaccinated on the 19th, he charged about forty points on the 26th. All the vesicles were fine and perfect, with the exception of those on one of the children vaccinated on the 17th. The deviation in this instance clearly arose from the co-existence of an affection of the skin, which manifested itself the day after the lymph was inserted, and so completely altered the character of the vesicle, as to render it unfit for use. I am the more induced to dwell for a moment on this latter event, as I have reason to know that the evils arising from inattention to deviations of this kind, are not sufficiently regarded by gentlemen employed by the Guardians in vaccinating the poor. I myself, at least, have had communications from two Unions on this very point. It cannot, therefore, be too strongly stated, that persons vaccinated under such circumstances, ought not to be considered as secure from subsequent attacks of small-pox.

Med. Gazette, Sept. 3, 1841, *p.* 915.

8.—TREATMENT OF SORE THROAT, OR ANGINA, BY ALUM.

By M. Velpeau, Paris.

[It was the celebrated and practical Bretonneau, while in the hospital of Tours, who first instructed his illustrious pupil, Velpeau, in many really practical views, and amongst the rest in the use of alum, &c., in inflammatory sore throat. M. Bretonneau first tried his remedies successfully in croup. Velpeau tried the nitrate of silver in 1819—in 1828 and 1829 he tried alum with success, and published a paper on the subject in the Gazette Médicale of 1830. In that paper he hints that the use of alum may be much extended, and cites the experience of M. de Laënnec, of Nantes, who assures us that by blowing powdered alum on the inflamed amygdalæ, we not only cure the disease, but prevent a relapse. Cases of angina are frequently so little influenced by antiphlogistic remedies, that we are warranted in seeking success from other measures. More-

over, many would be at a loss when to apply Bretonneau's treatment to croup or to angina with effusion of false membrane, and this because it is often difficult to distinguish the one from the other. This difficulty is removed when we can show that the same treatment is applicable to the one as well as to the other.]

Although, perhaps, it may be true that the experiments which I have recently made are not sufficiently numerous to put the question completely at rest, yet they seem to me so encouraging, that medical men should at least repeat them. The result of the treatment which I have employed was always the same. In all the cases, the inflammation had appeared suddenly, and was attended by fever; most of the patients commenced with the alum on the second day; the throat was then very red and painful, the tongue foul, &c.; some had arrived at the fifth, sixth, or eighth day, with high fever, redness and swelling of the face, considerable tumefaction of the amygdalæ, great difficulty of swallowing and breathing, thirst, &c.; in two cases suppuration appeared to be imminent. The treatment, as I have said, was the same in all cases, and consisted in the use of alum, either as a gargle or in powder. The tip of the finger moistened, is to be covered with powdered alum, and then rubbed all over the inflamed parts, whilst the tongue is depressed with the handle of a spoon. The powder may be applied with a small brush, or a bit of sponge, &c. on the end of a little stick, or it may be blown into the throat with a tube; but the use of the finger is preferable, for with it the surgeon can readily reach every point of the inflamed surface, behind the velum pendulum, and even as far back as the entrance to the larynx; besides, an intelligent patient can apply the powder ith his own finger, as I have often witnessed.

When a certain quantity of alum has been applied with the finger, the latter may be withdrawn, and a fresh application made, until the whole of the inflamed surface be covered with it, and, as a preliminary measure, the patient should frequently gargle his throat, to remove any mucus, &c. The use of the powder must be repeated twice or thrice a-day, at equal intervals, and in the mean time the patient should frequently gargle his throat with a solution of one to four drachms of alum in four ounces of barley water.

In employing the alum after the manner which I have just described, we generally produce some nausea, cough, &c.; but these soon disappear, and the acrid taste of the medicine is also soon lost. The pain and febrile symptoms almost always diminish in an evident manner, after the first or second application, and the patient improves so rapidly, that on the third or fourth day, (and in some cases on the following day) he feels himself perfectly well. The most remarkable effect produced by this remedy is the rapid disappearance of the febrile symptoms, and the change in the tone of the voice; one would think that some deleterious principle had been suddenly neutralized, and the disorder reduced to a simple mechanical obstacle, from the increased volume of the affected parts.

In cases where the inflammation is mild, and the throat merely red without being swollen, the alum gargle will be sufficient; even in more severe cases the gargle will often succeed, but it is then more prudent to have recourse to the powder at once. Amongst the advantages of this mode of treatment, one of the greatest perhaps is, that it seems to remove the well-known tendency of angina to recur; besides, the patient is not forced to lie in bed, and you may allow him some food without inconvenience, as soon as he is able to swallow.

[Several very excellent cases are given to exemplify the preceding practice.]

Prov. Med. and Surg. Journal, May 22, 1841, *p.* 145.

9.—SULPHATE OF ALUMINA AND POTASS IN HÆMORRHAGE.

By Martin Hamilton Lynch, M.D., lately Lecturer on the Practice of Physic in the Newcastle School of Medicine.

[Dr. N. Grattan some short time ago recommended alum in fifteen grain doses, combined with dilute sulphuric acid, as a remedy in profuse menorrhagia and in the hæmorrhage of abortion. Dr. Lynch relates the following case, which beautifully exemplifies the good effects of large doses of this drug in alarming hæmorrhage:]

In January, 1837, a gentleman aged 37 years, who had been for five months affected with hæmaturia, came under my care.

The usual treatment was pursued; he was bled and repeatedly cupped, and uva ursæ, turpentine, and pareira brava were successively but in vain administered during several months. In consultation, on the . . . . . 3 grains of the acetate of lead were ordered to be taken in a draught every eight hours, with 3 drops of laudanum and a drachm of vinegar. This treatment was persevered in for some days, when the occurrence of the ordinary symptoms produced by the deleterious action of lead, compelled the discontinuance of the draughts. The patient was reduced to an extreme degree of debility by the long continuance of hæmaturia, and his exhaustion and sufferings were much increased by the constipation, hiccup, colic, and tremors, produced by the lead, For several days he was so despondent that he refused to submit to treatment, but ultimately consented to take a laxative electuary and the following draught:

℞ Sulphatis aluminæ et potassæ, gr. xv.; Acidi sulphurici diluti, gtt. xxx.; Sulphatis magnesiæ ʒj.; Infus. rosæ, ℥j.; Fiat haustus, ter quotidie sumendus.

The quantity of alum was gradually increased from 15 to 45 grains, and the draught containing this latter quantity was continued for six days; under this treatment the patient's appetite increased, his general health improved rapidly, and the urine became clear. A relapse, however, took place; the urine again became bloody, but was quickly restored to a healthy state during the use of the draught, containing 45 grains of alum.

During the use of the draughts a curious change was observed to take place in the urine, which became almost black; as this alteration of colour had never before occurred, I am inclined to infer that it was produced by the absorption into the circulation and elimination by the kidneys of the free sulphuric acid, and of that contained in the supersalt and the combination of this acid with the colouring matter of the blood diffused through the urine, for although (through the previous progress of the case) the urine had always decidedly reddened litmus paper, this dark colour had not been produced.

Encouraged by the apparent energy of the remedy in this case, and the absence of any unpleasant symptoms from its employment, I have several times prescribed it in the hæmorrhages in doses of 45 or 50 grains, combined with 30 or 40 drops of dilute sulphuric acid, and a drachm or ʒiss. of sulphate of magnesia and ℥iss. or ℥ij. of water.

These draughts themselves have been almost always sufficient to produce a laxative effect on the bowels, but when this has not been the result of the exhibition, I order some mild purgative occasionally during their administration. Cullen, in his Materia Medica, observes that half a drachm of alum produces vomiting, but I have never seen this effect follow doses of 50 grains given three or four times daily, as in the preceding draughts. Perhaps, however, alum *alone* may excite vomiting, for it is not impossible that the sulphate of magnesia may prevent vomiting in the same way that Gregory's powder, colocynth pill, or compound rhubarb pill, or any mild purgative repeatedly administered in moderate doses, prevent or diminish sea-sickness, viz., by maintaining the natural peristaltic action of the intestines.

Alum is one of the safest of our astringents, but in cases of alarming hæmorrhage, acetate of lead in doses of 2 or 3 grains, repeated every six or eight hours, is usually prescribed, being considered a more efficient remedy. The acetate thus given is really a more powerful remedial agent than alum administered in the ordinary doses, the maximum of which never exceeds 20 grains; but in the large doses I am in the habit of ordering it, alum is little, if at all, inferior in energy to the acetate of lead, and has this advantage, moreover, that it may be taken with perfect safety by individuals who would be placed in the greatest jeopardy by the free exhibition of lead: for I cannot divest my mind of a suspicion that acetate of lead in 3 grain doses is more frequently productive of disagreeable consequences than is generally supposed. I am aware that such instances have not found their way into the journals, but that they not unfrequently occur I am disposed to infer, from having met with two such cases in my own practice.

Let us imagine a case of formidable hæmorrhage, which has, perhaps, recurred frequently for weeks or months, which is produced by, or complicated with organic disease, and is attended with great general debility and long existing anæmia. If alum be equally efficacious with the acetate of lead, would it not be a much more appropriate remedy in such cases?

Formerly alum was given internally in gonorrhœa; the great benefit derived from its use in a case of hæmaturia treated by Mr. Guthrie in the Westminster Hospital, in mine, and in one which my friend Sir John Fife, at my suggestion, treated with

alum in large doses, lead me to conclude that this substance is deserving of trial in gonorrhœa also, in which it may prove a convenient remedy when fever, inflammation, or irritability of the stomach forbid the employment of the turpentines.

The possibility of gastric inflammation being produced, suggests caution in raising the dose beyond 50 or 60 grains, repeated three or four times daily.

Provincial Med. and Surg. Journal, May 29, 1841, *p.* 162.

10.—OXIDE OF ZINC IN CERTAIN FORMS OF CONVULSIONS.

By Dr. Hennis Green, Lecturer on the Diseases of Children at the Hunterian School of Medicine.

[In the valuable "Contributions to the Pathology of Children," published by Dr. Hennis Green, in a series of papers in the Provincial Medical and Surgical Journal, the following case is related, which shows the good effects of the above remedy in certain forms of convulsion, which are closely allied to epilepsy:]

A. Milhois, fifteen months of age, is apparently of a good constitution, and born of healthy parents, who never laboured under any disease of the nervous system; has only eight incisor teeth; was weaned at the age of thirteen months, and soon afterwards was attacked by fits of an epileptic character; at first these did not recur very often, but they gradually became more frequent, and attacked the infant several times a-day. The parents thought that they were generally excited by the administration of food. The child was admitted into the hospital on the first of July, and placed on strict diet; some warm baths were administered. The epileptic fits were not long in showing themselves. Without any premonitory symptoms, the child was suddenly seized with agitation of the limbs and sharp cries, the expression of the face then became altered, the eye was fixed, the face of a purplish colour, the limbs rigid, the jaws clenched, and the mouth covered with foam; but this latter symptom was by no means constant. The respiration was troubled during the fit, being panting and very quick; the pulse, also, was extremely accelerated. The access usually lasted from five to ten minutes, when the child fell into a state of somnolence, from which it did not recover for half an hour.

During the intervals of the fits, the pulse was natural, and all the functions were apparently undisturbed; the evacuations were carefully examined, but no trace of the worms could be discovered in them.

July 3. The oxide of zinc was administered to-day, in two doses, of two grains each, morning and evening; the use of the warm bath was continued.

4. and 5. The epileptic fits recur with the same force and frequency; the ingestion of food does not seem to exercise any influence on them; for example, on the 6th, visitors' day, the child ate much more than usual, but had no attack on that day. The dose of the oxide of zinc is increased every day by two grains.

8. Had a severe fit; vomited two or three times during the day; the dose of zinc is now carried to twelve grains in the day. During the next few days the vomiting ceased, but the child was seized with diarrhœa and cough. The baths were omitted.

12. There was no fit to-day, nor yesterday; still it was thought prudent to continue the oxide of zinc up to the 22nd, when the little patient was taking twenty-four grains daily. The medicine was now discontinued, but the fit returned on the 23rd; it was therefore resumed on the 25th, and continued to the 30th, when the child was dismissed from the hospital, as no relapse had taken place. The parents were requested to bring the child back immediately on the appearance of a fit, but nothing has been heard of them since.

Remarks—The efficacy of the oxide of zinc in this case cannot be called in question. The patient had laboured under attacks of an epileptic nature for two months, when it was first administered; for a few days no effect was apparently produced, but the attacks became afterwards milder and less frequent, and ceased completely within twelve days. The use of the remedy was now discontinued; the fits return; it is again administered, and the epileptic convulsions disappear. M. Guersant, who frequently employs the oxide of zinc in the convulsive affections of children, has remarked that it often occasions diarrhœa. The same effect was produced in the present case, but the diarrhœa was not troublesome; the oxide of zinc, therefore, acts not only as an antispasmodic, but as a revulsive; and if it be advisable to prevent its action on the bowels, this

may be readily obtained by combining it with the extract of cicuta, hyosciamus, or opium.

Provincial Med. and Surg. Journal, July 10, 1841, *p.* 285.

11.—TREATMENT OF TAPE WORM.

By Dr. Wawruch, Professor of the Practice of Medicine in the University of Vienna.

[In 206 cases of Tape worm, Dr. Wawruch found the following treatment the most efficacious.]

As a preparatory step, all the patients took a laxative decoction with sal ammoniac, for three, four, or five days, and ate nothing but weak soup thrice a-day. In eight cases the worm was expelled by the mere effect of continued abstinence. The anthelmintic remedies employed were, castor oil, and the powdered root of male fern. From one to two table spoonfuls of the oil were given as a dose, alternately with one or two drachms of the powder twice or thrice a day.

Enemata of oil and milk were frequently thrown up, to attract the worm towards the large intestine, and it was observed, that the effect of the drastic was always most sure when given a certain time after the last dose of fern, than at once. The drastic purge employed was composed of equal parts of calomel, gamboge, and sugar, two to eight grains of each for a dose. In many cases a single dose brought the worm away, but in others three to six doses were required. The period at which the worm was discharged was very various. In eight cases, as has been already remarked, it was expelled by the mere effect of hunger; in thirteen cases, by the anthelmintics alone; in eleven by the first, in fourteen by the second, and in fifteen cases by the third drastic purge; and, generally speaking, it was expelled within one to twelve hours after the last drastic. In few cases, two, three, four, (and in one) twelve days elapsed after the last purge, before the worm was expelled. The tænia is not exclusively a *solitary* worm, for in nine cases there were two worms, of different ages and development; in two cases three worms. In one very remarkable case, four worms were discharged, and this patient still suffers from the complaint. Of the 206 cases only twenty-six had a relapse;

twenty of these came twice, five thrice, and one of them four times to the hospital. Some came in two to four months; two in nine months; two in a year. Generally speaking, the patient may expect to be entirely freed from his disease, if he pass ten or twelve weeks without discharging any remnants of the worm.

Provincial Med. and Surg. Journal, July 10, 1841, *p.* 287.

12.—ON HIPPURIC ACID.*

By Alexander Ure, M.D., A.M.

In a paper communicated by me to the Medico-Chirurgical Society in the month of January last, it was pointed out, for the first time, that when a certain portion of benzoic acid, or of soluble benzoic salt, is introduced into the human stomach, a remarkable change takes place in its passage through the kidney. The urine voided in the course of a couple of hours after its ingestion, amounting usually to five or six ounces, will be found, upon adding a twelfth part of muriatic acid, to yield by-and-bye a copious precipitate of beautiful rose-pink acicular crystals. These, when examined by the microscope, exhibit the form of a four-sided prism, terminated by a dihedral summit. Now this is precisely the crystalline character of an acid peculiar to the urine of the horse, cow, and other graminivorous animals, and to which, for that reason, Liebeg has assigned the name of *hippuric*.

By this singular interchange of elements, capable of being effected only by the aid of vital chemistry, we have an organic product, uric acid, containing eight atoms of azote and ten of carbon, replaced by one, hippuric acid, containing no less than eighteen of carbon, and only two of azote! In pursuing the above investigations a step further, it was ascertained that no trace whatever of uric acid or any of its salts could be discovered in the urine in question. In point of fact it had been wholly superseded by the other acid.

The important circumstance connected with this research, as bearing upon medical practice, is, that the salts which this new acid forms with the ordinary bases occurring in the animal fluids,

* In article 24 of our third number will also be found a paper on this subject, but we publish this, on account of its entering more fully into this interesting subject.

is soda, ammonia, and potash, are all of easy solubility. Thus hippurate of soda requires about two parts of water, at 60° Fahr. to dissolve it, whereas the corresponding uric salt, which constitutes, as is well known, the gouty concretions or chalk stones, is acknowledged to be nearly as insoluble as uric acid; it requires at least 4000 parts of water to dissolve one. Hippurate of ammonia again is but little less soluble than the hippurate of soda, while the urate of ammonia will only dissolve to the amount of 1-480th part. Hippurate of lime, the least soluble of these salts examined by me, requires eighteen parts of water to dissolve one.

The application of the above principle has proved of material benefit in the treatment of certain unhealthy conditions of the urine, occurring in subjects of a calculous or gouty diathesis; since it enables the practitioner to obviate entirely the various depositions resulting from excess of uric acid, the fruitful source of that most distressing malady, stone in the bladder; as also to controul and prevent the formation of the so called tophaceous concretions or chalk-stones, which occasion so much inconvenience, deformity, and pain to individuals labouring under gout.

By judicious exhibition of the benzoic acid, or, according to particular circumstances, of a benzoic salt, that is to say, apportioning the dose to the state of the renal secretion, best previously ascertained by analysis, we can fulfil the desired indication with unerring precision, and that, as shown in the above paper, without any risk of affecting the general health, or of irritating the urinary organs.

It is to be kept in mind that this plan of treatment by no means precludes the adoption of other suitable remedial measures. Of course certain rules of diet must be observed, which there is no necessity for referring to here. It would be equally irrelevant to occupy your time with the details of cases, several of which have lately come under my notice, and go to corroborate the statements above made.

As benzoic acid is apt to irritate the fauces, unless administered in a liquid state, and as it needs a large quantity of water to dissolve it, it will be found expedient to give it along with phosphate or biborate of soda; since they enhance its solubility without abating its specific power. Thus, four parts by weight of the former, or one part and a half of the latter salt, will enable a comparatively small proportion of distilled water to take up

one of the acid. This difficulty, as is obvious, does not apply to the benzoate of ammonia or of potash.

Phosphate of soda not only serves to hold benzoic acid, but likewise hippuric acid, in solution; and this is a point of some consequence, seeing that any excess of the latter acid, accidently present in the urine, will remain dissolved by means of the neutral phosphate of soda, or the triple phosphate of soda and ammonia (microcosmic salt) naturally existing in that secretion. These phosphates, however, produce a very different effect upon the uric acid, inasmuch as they promptly convert it into urate of soda, by depriving the salt of one-half of its base, and thereby transforming it into biphosphate. This fact, which recently presented itself to me in the course of some experiments, and which has not been heretofore noticed by any chemical authority, seems to furnish a simple and rational explanation of the mode of formation of urate of soda, the basis of chalk-stones. Hence, whenever the oxidizing process of the kidney is proceeding with such energy as to supply a superabundance of soluble phosphates on the one hand, and of uric acid on the other, there must inevitably result an excess of urate of soda.

Having premised the above observations with the mere view of pointing out what appears to cast some new light upon the importance of benzoic acid and its compounds, as therapeutical agents in virtue of their power of generating hippuric acid, it has appeared to me proper to indicate the distinguishing features of these two acids, as some objections have been started touching the difficulty of discriminating the one from the other. For convenience sake, the leading peculiarities have been arranged in collateral order, as follows:—

Benzoid Acid	*Hippuric Acid**
Crystallizes in hexagonal needles, or in white, diaphanous, pearly, flexible laminæ.	Crystallizes in four-sided prisms with dihedral summits.
Is soluble in two parts of ether.	Is very sparingly soluble in ether.
Is not changed by dilute nitric acid.	Treated with dilute nitric acid, and evaporated to dryness, produces, on the addition of ammonia, a beautiful purple colour.

* The verifications were all made with hippuric acid derived from the human subject.

Heated with three times its weight of hydrate of lime generates simply benzole.	Heated with three times its weight of hydrate of lime disengages a quantity of ammonia.
Benzoate of Ammonia,	*Hippurate of Ammonia,*
On being exposed to a strong heat, melts and flies off in benzoic acid fumes, without leaving any appreciable residuum.	Exposed to heat, melts and assumes a rose-red colour, forming a reddish acid; which being dissolved in water and evaporated, affords red crystals, resembling hippuric acid in their properties.
Benzoate of Potash,	*Hippurate of Potash,*
Burns without emitting any particular aromatic odour.	Heated so as to undergo decomposition, exhales the odour of bitter almonds.

On the whole, sulphuric ether furnishes the readiest test for distinguishing these two acids, from the easy solubility of the one, and the difficult solubility of the other in that menstruum.

Provincial Med. and Surg. Journal, July 17, 1841, *p*, 317.

13—TREATMENT OF SPASMODIC AFFECTIONS OF THE LARYNX WITH VERATRIA.

By James Tunstall, M.D.

[It is now well known to the profession that Dr. Stephenson Bushnan has strongly recommended the ointment of veratria in the treatment of dysmenorrhœa. Dr. Bushnan supposes that dysmenorrhœa may frequently be owing to perversion of the nervous action of the lower portion of the spinal nerves, and found good effects from the external application of the ointment of veratria. Dr. Tunstall suggests that if the ointment of veratria has this effect on the lower portion of the spinal marrow why may it not have a similar effect on the superior portion: and in this latter case it would be supposed to be useful in spasmodic affections of the larynx and appendages. Dr. Tunstall accordingly tried it in the case of Mrs. Stokes with this view. Mrs. Stokes was a school-mistress: she was

usually seized with a sense of suffocation, the whole of the muscles employed in respiration were put into violent and convulsive action, the lower extremities became cold, the face purple, the whole surface was bedewed with cold perspiration; she was perfectly sensible during the whole attack; the fit usually terminated in ordinary dyspnœa which lasted for hours or even days. Every variety of depletion and counter-irritation had been employed; also opiates and anti-spasmodics, without the least advantage.

Dr. Tunstall therefore resolved to try the ointment of veratria; respecting which he says:]

I therefore prescribed a scruple of veratria to one ounce of simple cerate, and directed that a small portion should be applied on each side of the cervical vertebræ, and rubbed well into the neck, throughout its whole extent, twice a day. About a fortnight after commencing its employment, she had an attack of what she said would have been her old complaint, but she repeated the ointment as soon as she felt it coming on, and it terminated in simple dyspnœa, without spasm or expectoration, in an hour or two.

She persisted in its use about two months, during which time she had several attacks of winter catarrh, but without spasm; she discontinued its employment in December, and from the 21st of October, the day on which it was first prescribed, to the 20th of June, she had no return whatever of her spasms, but recovered her health so well, that she was enabled to walk eight miles without assistance, whereas, previously to its use, she rarely if ever left her residence, as it always induced a return of the spasm.

I shall not offer any remarks on the efficacy of the veratria in diseases attended by undue nervous excitability, or perversion of nervous action; but I am led to believe, by the result of the above case, the only one in which I have tried it, that it is a valuable addition to the materia medica, and one which may be safely employed for the relief of those distressing nervous affections which have hitherto baffled professional skill.

Prov. Med. and Surg. Journal, Aug. 14, 1841, *p.* 388.

14.—TINCTURE OF ACONITE IN NEURALGIA AND CHRONIC RHEUMATISM.

By Joseph Curtis, Esq., Cambden Town.

[Dr. Pereira recommends the external application of this powerful drug in cases of the above-named diseases, when fever, inflammation, and other constitutional disorders are absent; in short, whenever there is violent pain without any other particular marks of disease. Mr. Curtis gives some interesting cases in the Lancet, to show the efficacy of this treatment. He rubbed the tincture on the part affected with a small piece of sponge tied on the end of a stick; for if it wet the fingers it produced an unpleasant numb sensation. The rubbing must be continued till the requisite quantity of the tincture is used. Mr. Curtis relates the following cases:]

Case 1.—*Painful affection of the nerves about the hip.*—Margaret May, ætat 35, Jan. 16, 1840, about six weeks after parturition, was attacked with severe intermitting pains about the gluteal muscles and loins, and shooting round into the groin, and sometimes half way down the thigh. She is unable to sit up or move in bed; she has headach, but no other constitutional affection.

Leeches, aperient medicine, &c. were used, from which she experienced slight relief, but the pain soon returned.

18. The pain has been very severe to-day, but at present is easier, unless she move, which brings on a return; bowels confined; head much worse.

Take two aperient pills, and rub in one drachm of the tincture of aconite.

19. Has passed a good night, and has had no pain since the tincture was applied; had cramp in the calf of the leg for a short time; has headach at present.

She had no return of the pain about the hip after this; the headach was relieved by ordinary means.

Case 2.—January 20, 1840, —— a glazier, complained of rheumatism in the elbow joint, of three days' standing; the part was slightly swollen, and tender; he experienced great pain upon extending or flexing the joint; no constitutional symptoms.

Rub in one drachm of tincture of aconite. The pain was much relieved at the time; could extend the arm but not flex it, probably from the skin being swelled. He did not attend again.

Case 3.—Jan. 23, Miss P., ætat about 35, is subject to rheumatism of the scalp, particularly in cold or windy weather; has had severe pains to-day, the weather being very windy; has no constitutional symptoms.

Rub in two drachms of the tincture of aconite.

24. Has had no pain since the application.

I saw this lady occasionally for some weeks afterwards, during which she had no return of the pain. Although living near me, she has not since applied to me; therefore I consider the cure perfect.

Case 4.—Jan. 25, 1840, Mr. Y., ætat about 70, has severe pain along the lower jaw, on the right side, and shooting up to the forehead, in the course of the fifth pair of nerves; likewise over the posterior part of the right parietal bone.

Apply two drachms of the tincture.

Felt the usual sensations of cold, heat, and numbness during the application; and lost the pain in about a quarter of an hour. I saw him about six weeks afterwards, when he had had no return of the pain.

This gentleman was very much out of health at the time, his digestive organs being disordered, accompanied by fever, &c., which symptoms remained after the pain in the face was removed.

Case 5.—Mary Keith, ætat about 40, has been long subject to rheumatism, by which the use of her hands is impaired. At present complains of severe pain across the forehead, on the left side, in the situation of the course of the supra-orbital nerve. The pain comes on several times daily, and is much increased by going near a fire. During the accession of pain she loses the sight in the left eye. Has had pain under the right lower jaw, which is better; otherwise she is in tolerable health,

Apply one drachm of the tincture.

The application produced the usual symptoms, and with them the loss of sight in the left eye. After the numbness left her the sight of the eye returned, but she felt no more of the pain.

This is a remarkable case, showing that there is some very important connection between the supra-orbital nerve and the organ of vision.

Lancet, June 26, 1841, *p.* 474.

15.—ON THE STRUCTURE OF THE SMALL POX PUSTULE, &c.

By W. H. Judd, Esq., M.R.C.S., Surgeon to the Fusileer Guards, &c.

[The following observations of Mr. Judd will be read with interest, inasmuch as they will enable us to practice less empirically in our applications to the surface, when we wish to prevent the pitting and deformity so common in this disease. Mr. Judd has taken great pains to dissect the skin while under the influence of small pox in its various stages; and he has discovered a remarkable septum and band in each pustule. He says:]

This eruption commences by little red points on the skin (as described by Hooper and others,) resembling flea-bites. This appearance I found to arise from increased vascularity, caused by zones of minute vessels enlarging and projecting from the surface of the cutis; they secrete a thin serum, which gradually raises a ring of the cuticula externa from the rete mucosum, and so forms a vesicle, without breaking up some of the thread-like attachments and ducts in the centre, between the cutis, rete, and cuticle. Hence the cuticular covering of the vesicle is bound down at that spot by this thread-like band which causes it to have a peculiar depressed summit. As the disease advances, the efflorescence and inflammation increasing, the serum becomes gradually more opake, and coagulable lymph is next thrown out, which at once consolidates and forms a thin flat layer, or plate, shaped like a cymbal, but with a small hole left through its centre, from the circumstance of the coagulation taking place around the before-mentioned thread-like attachment of the cuticle. About this period the fever and inflammation are increased (called the secondary or suppurative fever); and in this stage pus being secreted instead of lymph, it elevates the lately-described cymbal-like plate, and causes it to divide the cavity horizontally into an upper and lower cell. As the disease advances, the progressive distention breaks up the remaining attachment between the cuticle and cutis: the pus in the cell

below passes through the hole in the cymbal-like plate, or septum, above, and blends with the serum in the vesicle, changing it into a pustule (called the maturing stage). By this time the lower part of the pustule is completed by an extremely thickened state of the rete mucosum, which forms a raised lip, or cup, constituting its base; so as, in ordinary cases, to shut off and protect the cutis from the contact of pus and ulceration. Hence, in most instances, the pustule may be stripped off with the cuticule and thickened rete, leaving the cutis entire; but the cutis vera has frequently a slight depression, or pit, left from the effect of the ulceration which has penetrated the base of the cup; and occasionally a small papula or two of the cutis is found projecting into its centre, to which the thread-like band of attachment from the cuticle still adheres.

Having described the rise and progress of the vesicle to its completion as a pustule, with the various stages of accompanying inflammation, it now remains for me to describe the part we are most interested in; viz., its decline and consequences. Well, about the eleventh day (varying a day more or less in different epidemics) the cuticular covering bursts a little to one side of the apex of each pustule, and its contents gradually oozes out. If the affection has run through its stages mildly, the chief part of the fluid evacuated is but opake lymph, which drying forms a dark crust; if on the contrary, the disease has been severe or confluent, an offensive pus is let out, which leads to scabs, sores, and ulcers in various parts. In bad and confluent cases, where inflammation has run high, not only is pus formed in contract with the cutis at the base of each pustule, but there are also thrown off shreds or sloughs from the true skin, causing permanent depressions, or white pits, for life. Temporary red stains are always left upon the skin, for a time after this eruption, and are caused by increased vascularity, thickening and rising of the rete; but these disappear, if no ulceration takes place.

Having anatomically traced the cause, we are now fully prepared to enter upon the second stage of our inquiry; viz., the prevention of the effect, or pits, and consequent deformity. In the first place, I shall premise the propriety of lessening, on the attack, the attendant fever and heat by all prudent means; as the height to which the edges of the cup, or scar, will rise, and the depth to which ulceration, or slough, will proceed, depend in a great measure upon the degree of inflammation and

fever (though some families are certainly also influenced by constitutional peculiarity); but, commonly, I cannot advise blood-letting, especially to any extent, on account of the debility that invariably follows this disease; nor can I praise the use of antimonials and medicines that determine to the skin, as by increasing the cutaneous circulation they give rise to a fuller development of the pustules. I believe the safest and best mode of treatment is to give a brisk cathartic of calomel and jalap; to keep the patient on a strictly antiphlogistic diet; to put out the fire and lighten the clothing, so as to keep the sufferer's temperature as near the standard of health by the thermometer as possible, yet not so low as to impede a fair development of the eruption on the most parts of the body. Nor must we abstract food, for so many days in succession, as to let the system flag from that cause; for a certain degree of vigour is needful: but all beyond this does harm. Just after maturation the patient will require support; and in some cases, meat, wine, or even bark. I should not have touched upon treament, had not the size of the pustule, and consequent extent of the pit and deformity that will remain after the eruption, so much depended on it; and also the prevention of cerebral symptoms, sometimes said to occur on interfering with, or suppressing, much of the general eruption.

I shall next remind the reader, that the face, arms, and parts commonly exposed to light and air, always, as we might anticipate, suffer most deformity by small-pox pits; for air and light give vigour to arterial action, darkly tint the leaf, and heightens colour in the cheek and pits. Hence small-pox pustules on the tongue, throat, and parts excluded from their agency, are nearly white, and seldom fully developed; and hence the success of Dr. Pelion's method of preventing the ulcerative process, pits and stains, by the exclusion of light and air from the chamber of the sick. But in doing this the opposite extreme must be avoided; for it is well known that warmth and moisture (for you can scarcely exclude the air without increasing warmth and moisture) increase suppuration, and materially influence the development of all eruptions: even a poultice applied to a vaccine *vesicle*, from its warmth and moisture, will so alter the action of its secretory vessels, as in twenty-four hours to convert it into a *pustule*. Destroying the pores and transparency of the skin by the application of nitrate of silver, successfully practised by

Dr. Serres in this disease, amounts, in my opinion, only to the exclusion of light and gases.

Mr. Le Grand's plan of smearing the surface with gum mucilage, and covering with gold-beater's skin, also lessens the action of light and excludes air; but it advances a step farther, by exerting another powerful curative agency, viz., an uniform pressure, which reminds me of a method I have pursued for years, that of curing pustules, vesicles, and sloughing ulcers on the face, &c., by a stiff coating of hot yellow wax and oil, after they had resisted all common treatment.

Mr. George's plan of caking over the surface with calamine, acts not only by excluding light, but by absorbing moisture, and through its astringent qualities causing contraction of the living pustule. I have long since so applied the white oxide of zinc, and found it to act in similar way upon vesicles, causing them to break, part with their contents, and heal. A coating of pure liquor plumbi acts in almost the same manner; and many eruptions about the face, hands, and neck, that have been obstinate cease to come out, and speedily heal, if light and air be excluded and motion restrained by uniform pressure; though effected if only by adhesive plaster and a roller.* Thus we approach by degrees, and in effect almost to the method recommended by Dr. Olliffe; viz., the application of emplastrum ammoniaci cum hydrargyro, which in itself seems to possess the curative qualities of most of the other methods, with the valuable addition of power to promote absorption of the serum and lymph, when applied early in the disease, or even of the raised edges of the cup-like bases, which give rise to pits, scars, and seams in a latter stage. If the serum and lymph be thus caused to be absorbed, the vesicles are not completed, and therefore the pustules do not occur. And this power over the disease we may fairly consider the remedy to possess, especially knowing, as we do, that the absorption of new-formed parts can be so much more easily promoted than that of originally-formed structure. Any other specific action from the mercury and ammoniacum appears very unlikely; and as to animalcula causing the pits, Dr. Olliffe may certainly dismiss the idea from his consideration, notwithstanding that animalcules exist in all long-retained secretions in the human body.

* I have not noticed the early puncturing of each pustule, which is useful to prevent pits, and but anticipates Nature's plan.

After numerous dissections and microscopic examinations, I may affirm that this eruption does not commence by enlarged papillæ but by simple zones of minute vessels projecting from the cutis, throwing out serum, and raising a vesicle; and that although the red depositions protrude beneath the cuticle, so as to be felt on the surface, it is merely from distention; and enlarged papillæ are not to be found until after the maturating stage, and not then, except in the base of the pustule, and only when ulceration has penetrated the surface of the cutis. In many cases, even where lasting pits and deformity ensue, sloughing and ulceration will not generally be found to have penetrated through the corium to the cellular membrane beneath. I explain these points merely to set right some mistaken theory in the lately published paper.

The application of the mask, or plaster, in the very early part of the eruption, is well insisted on. It should be applied as soon as the nature of the eruption is ascertained, and the red projections can be distinctly felt as early as the third day, and be continued *without intermission or removal* until the maturating stage has been completed in other parts of the body, a period of about five days. That this mode of treatment possesses vast power to arrest the full development of the eruption is undoubted; and I conceive so innocent a preventive merits trial by all medical practitioners desirous of preserving the appearance of their patients, and of advancing science.

Lancet, June 12, 1841, *p.* 392.

16.—TREATMENT OF ACUTE ARTICULAR RHEUMATISM BY LARGE DOSES OF NITRATE OF POTASH.

By M. Aran.

This is a very long paper, detailing the results of twelve cases of acute rheumatism treated by MM. Gendrin and Martin Solon. Of these ten were males, two females, from the ages of sixteen to forty; the stage of the disease varying from the second to the fifth day, and the previous treatment having been unimportant. The nitrate of potash was administered in some demulcent ptisan, the mean quantity taken by each patient being *an ounce and two scruples per diem,* and twelve ounces

throughout the whole duration of the disease. The mean duration of the disease was eight days from the commencement of the treatment, and rather more than twelve from the period of invasion. The usual effects were very abundant perspirations; occasionally copious stools, but without colic; and free secretion of urine. The digestive organs were unimpaired in their functions; only one patient vomited: the pulse was depressed; and the pain in the joints rapidly diminished. In three cases complicated by endocarditis or pericarditis, these affections rapidly subsided, though no other remedies were employed. Only two patients suffered a relapse, and they were again cured by the same means.

[This treatment is not new, for Brocklesby and White in this country, towards the close of the last century, gave nitre from ten drachms to two ounces in the twenty-four hours, and spoke highly of its efficacy both in acute and chronic rheumatism. However, the mean duration of the disease under its use does not appear to be less than is obtained by other means. Dr. Hope, who trusted to calomel and opium, states the usual duration to be eight or ten days, and we have frequently seen severe cases rapidly cured by colchicum and opium. Bouillaud, who employs free bleeding, gives one or two weeks. Dance, who gave the tartarized antimony freely, forty to sixty days. The nitre is evidently preferable to the two latter.—*Ed. Brit. and For. Med. Rev.*]

British and Foreign Medical Review, July, 1841, *p.* 247.

17—TREATMENT OF HÆMOPTYSIS WITH TARTRATE OF ANTIMONY.

By Dr. Stoll, of Vienna.

It might at first be presumed that the tartrate of antimony, in consequence of its vomitive action, should rather aggravate than arrest the spitting of blood from the lungs; but, from the observations of Stoll, it appears that this is really not the case. The following instance, among many others, related by the illustrious physician of Vienna, is well worthy of notice.

"I remember," says he, "to have had under my care a young Turk who had been seized with bilious fever and with profuse hæmoptysis. I immediately ordered him a vomit

The attendants were frightened at the prescription, and most anxiously awaited the effects of the medicine, being afraid that the hæmorrhage would be greatly increased by the effects of vomiting. But no sooner had the patient rejected a large quantity of bile from his stomach, than all traces of the hæmorrhage ceased, and he recovered without any return of it."

After citing numerous similar cases, Stoll remarks:—"*Vomentes ne guttam sanguinis rejecerunt, quasi ipsa emesis hiantia pulmonum vasa quovis auxilio citius atque efficacius stringeret; et, vomitu jam peracto, aut nihil omnino sanguinis, aut ejus nonnisi paucum quid per intervalla et ad exiguum tempus comparuit.*"

It should be stated that Stoll seems to have employed this mode of treatment only in cases of hæmoptysis accompanied with bilious symptoms, and seldom in those where there was any marked predisposition to pulmonary consumption.

Several writers subsequently have adopted the emetic treatment of hæmoptysis, and very different results seem to have been obtained in the hands of different physicians; for, while some strongly approve of it, others as energetically condemn it. As a general remark, we may state that ipecacuan has usually been preferred as an emetic in cases of pulmonary hæmorrhage to any of the preparations of antimony; the former drug being supposed to possess a peculiar astringent property on the vessels of the lungs.

M. Nonat, one of the physicians of the Hôtel Dieu at Paris, however, has of late been using the tartrate of antimony in numerous cases of the disease, and reports most favourably of its effects. He has used it not only when the stomach and liver were evidently at fault at the same time, but also in many instances where there was no disturbance of the digestive organs, and where, therefore, the only indication was to arrest the discharge of blood from the chest.

Case.—A man, 30 years of age, was admitted into the Hôtel Dieu on the third day of an attack of hæmoptysis, which had resisted bleeding from the arm and the use of other remedial means: it was the first attack of the disease which he had ever experienced.

The symptoms on his admission were well marked: frequent cough, with the expectoration of frothy sanguineous sputa; mucous and sub-crepitant *râle* over the summit of the right

lung (percussion gave a dull sound at this spot); sense of heat in the chest, and dyspnœa; pulse frequent and rather strong. There were also symptoms of considerable gastric disturbance, such as a coated tongue, bitter taste in the mouth, nausea, &c.

An emetic of tartrate of antimony was ordered; the stomach symptoms were quickly relieved, and the spitting of the blood entirely ceased.

The *second* case is very similar, and the *third* one was still more severe.

A middle-aged woman was seized with a second attack of hæmoptysis, which had already continued for four days before N. Nonat saw her. The previous attack had occurred two years before, and had lasted for nine days, before the hæmorrhage entirely ceased. An antimonial emetic was at once ordered her; it caused her to vomit three or four times freely; at the expiry of a few hours the sputa ceased to exhibit any trace of blood; and, from this time, they were nearly colourless.

After mentioning another successful case, M. Nonat then adduces the history of other two cases, in which the emetic practice failed altogether in arresting the sanguineous expectoration. In one of these, the patient was evidently labouring under tubercular phthisis in an advanced stage; the first dose of the emetic seemed to produce little or no effect on the pulmonary hæmorrhage; but, on being repeated a few days subsequently, it was distinctly increased, and considerable difficulty was experienced in subduing it.

M. Nonat candidly admits, that the exhibition of emetics in a case of hæmoptysis, where we have reason to suspect ulceration of the lungs, is scarcely warrantable; and he very judiciously adds, that the practice is best suited to those cases of the disease in which the hæmorrhage is of an active nature, and is accompanied with the *molimen hæmorrhagicum.—Bulletin de Therapeutique.*

[The editor of the Medico-Chirurgical Review adds the following remark with which we cordially agree, as the treatment by small doses of tartrate of antimony so as to keep up a state of nausea, fully confirms Mr. Trenor's opinion given in a former number of this Retrospect. (See Vol. I, Art. 12)]

We have, for several years past, been in the habit of employing the tartrate of antimony in the treatment of hæmop-

tysis; but rather in small doses repeated at short intervals, than in full doses as an emetic. For example, a grain and a half, or two grains of the salts, may be dissolved in eight ounces of water, and half an ounce of syrup of poppies added to the solution; of this mixture, two table-spoonfuls should be given every two or three hours. We can confidently recommend this practice, both for its safety and its efficacy.

Medico Chirurgical Review, July 1841, *p.* 190.

18.—CROTON OIL IN NERVOUS DISORDERS.

By John Cochrane, Esq., Edinburgh.

[The following cases will confirm the observations of Dr. Newbigging, to be found in article 11, of our last Vol.]

Some time ago I was called to attend a patient aged about 30, of a strong and robust constitution. When I first saw him, he was outrageous, and could not easily be managed by four strong individuals. His gestures, deportment, and violence were such as would have induced many practitioners to have had recourse at once to the straight jacket, but to me they occasioned little alarm, as I well knew the certainty of my remedial agent speedily producing an effect, at once useful to the patient, and gratifying to those around him. I prescribed as follows:

℞. Ol. Tiglii gtt. x.; Muc. G. Arab.; Syr. Simp. aa ʒ i. Misce. Sign. Give a teaspoonful every ten minutes till he become calm.

Half an hour had scarcely passed when he became quiet, and at the end of an hour, he had so far recovered as to be able to sit up in bed, and give rational replies to every question, whereas, before he got the medicine, he could scarcely articulate one word distinctly. Under the use of the above remedy, this individual ultimately so far recovered as to be able to follow his usual employment as a house painter.

In December 1839, I was called to attend a female patient, whom I found in bed completely prostrate, and apparently insensible to every thing around her. In fact she was completely comatose,—her pupils were greatly contracted, her pulse could scarcely be felt, and in fine, she seemed all but sunk into the sleep of death. The remedy which I employed in this case.

was the croton oil, in combination with mucilage and castor oil, thus proportioned:—

℞. Ol. Tiglii, gtt. viij.; Ol. Ricini, ℥iij.; Mucil. G. Arab. ℥i. Misce bene. Sign. Enema. To be administered in a quart of gruel.

Though I employed the above potent remedy, I must say, I scarcely expected any good to result from it; but to my great joy and satisfaction it had a most beneficial effect upon the patient, not by producing an alvine torrent, but by occasioning a very copious discharge from the bowels per anum, as well as from the stomach by vomiting, together with a return of sensation and motion, and the use of her mental faculties. Indeed the effect of the medicine was truly astonishing, for when I left her she seemed all but dead. On my second visit only a few hours afterwards, she was able to sit up in bed and converse with those around her.

The following case I deem of great importance in regard to the effects of croton oil. It did not occur in my own practice, but in that of a gentleman in whose testimony I can place the utmost confidence. About two years ago he was called to see Mrs. E., who had been ill for about a fortnight. Her disease appeared to depend entirely upon obstinate constipation, to remove which, the medical gentleman who had been previously in attendance upon her, had used a great variety of powerful purgatives, which failed to produce the desired effect. My friend was at this time in the habit of prescribing croton oil very freely, and considering this a good case for its exhibition, he ordered her to take eight drops, which, though a large dose to commence with, proved ineffectual. After a few hours, he repeated the medicine in small doses, till the patient had taken in all fifteen drops within twelve hours, when the bowels were freely opened. The purging which followed gave immediate relief, and Mrs. E. rapidly recovered, without suffering any injury from the large quantity which she had taken of this powerful oil.

London and Edin. Monthly Journal of Med. Science, July, 1841, *p.* 475.

19.—TREATMENT OF CHOREA.

By T. H. Wardleworth, Esq., Rochdale.

At a recent meeting of the Royal Medical and Chirurgical Society, at which Sir Benjamin C. Brodie presided, several

gentlemen then present expressed sentiments entirely at variance with each other, as to the pathology of chorea—some asserting that the brain and its membranes were the immediate seat of the disorder—others the medulla spinalis and its membranes.

Notwithstanding the lucid manner in which the pathology of the disease has been treated by Drs. Copeland, Prichard, and Bright, there still remains a doubt as to the real seat of chorea. From a careful analysis of the different opinions given relative to the peculiar morbid appearances presented to the view of the pathologist, I am decidedly inclined to view them as the consequences, rather than the cause of the disease.

If we refer to the condition of the intestinal canal, we shall find, I am disposed to believe, causes acting, that will produce all the varied motions of the voluntary muscles, not dependant on any organic lesion, either of the brain or spinal cord.

This state produces derangement in the whole of the chylopoietic viscera, setting up thereby constant gastro-intestinal irritation, with a morbid action in those filaments of nerves, called by that distinguished physiologist Dr. M. Hall, *incident*, and which is conveyed by them to the spinal cord, these communicating, with the assistance of other nervous filaments, the involuntary motor, which cause, by what Dr. H. terms reflex action, those phenomena to appear which are so characteristic of chorea. Puerperal mania frequently depends upon the presence of scybalous matter in the bowels; and on the removal of it, the disease has been known to subside. A variety of non-congenital talipes is supposed by Dr. Little to arise from "some deviation from the healthy state in a part of the spinal marrow, where the roots of the motor nerves distributed to the muscles of the calf of the leg are implicated or irritated, causing them to become involuntarily contracted; or these may exist elsewhere from disease, such as an irritation of the mucous membrane of the alimentary canal, by improper or undigested food, or worms." Following out this train of argument, may we not suppose, as I have already intimated, that functional derangement of the mucous membrane of the bowels may produce chorea, through the medium of the nervous system, thereby producing the contortions which we witness in this disease.

The indications of cure are, I think, 1st, To unload the bowels, if a torpid condition of them exist; and, 2ndly, To restore the tone of the stomach and intestines. The purgative formula which I have found the most effacacious, is the following:—

℞. Ext. Elaterii, gr. j.; Pulv. Jalapæ, gr. xxxvj.; Pulv. Zingib. gr. xxiv. Misce et divide in chart. xij. capt. j. quarta quaque horâ donec alvus soluta fuerit.

From the well-known character of the elaterium upon the exhalants of the intestinal surface, it is, in my humble opinion, the most likely to promote not only a free defecation, but it will also have the salutary influence of increasing the natural secretion from the mucous membrane of the alimentary canal, thereby fulfilling the first indication. I have mentioned what I find from experience, to be the advantages arising from using the elaterium, as many practitioners object to its employment, in consequence of its powerful effects on the bowels; yet, whatever may be the objections urged against this medicine, I feel convinced, from past experience, that it is highly efficacious in restoring the languid condition of the intestinal canal.

After the bowels have been fully acted upon, should the disease still continue, I then prescribe that important therapeutic agent, the ammoniated tartrate of iron,—a remedy which, though little known, still posesses chalybeate properties far superior to any other preparation of iron, with the exception of the magnetic oxide. Its pleasant taste, and perfect solubility in water, render it exceedingly agreeable, even to the most fastidious.

I am inclined to think, that this remedial agent will ere long be introduced into the pharmacopœias, and if given according to the manner I am in the habit of prescribing it, no practitioner will be disappointed in the results expected from its use. No doubt there are complicated cases of the disease, which render other treatment advisable, and which approach to epilepsy, so decidedly marked, as to leave no doubt of the propriety of having recourse to the antiphlogistic plan of treatment. Though this is the case, I have not seen one instance where I thought it necessary to adopt the starving plan of cure. Neither blisters, nor any other external application have I prescribed, since I adopted the use of the ammoniated tartrate of iron in chorea, never having been disappointed in my expecta-

tions of the means employed. My mode of using this elegant preparation is the following. I commence by giving three grains three times a-day, (in quovis vehiculo,) the dose to be gradually increased to five grains, which will generally be found sufficient to subdue the disease, care being taken at the same time to keep up a free action of the bowels, combined with a light yet nutritive diet. Free exercise in the open air, after the disease appears to decline, is essential to the patient's perfect recovery. From a fortnight to three weeks is about the average time required by the proposed treatment to subdue the worst forms of chorea.

Such is the mode of treatment which I have adopted for some time, and I indulge the hope, that if adopted, the whole farrago of antispasmodics may be dispensed with in the treatment of chorea. I am fully persuaded, from ample experience, that should my manner of treating this affection prove as successful with other practitioners, as it has been in my own practice, that the ammoniated tartrate of iron will assume a place amongst the highest in the list of chalybeates.

Lond. and Edin. Monthly Journal of Med. Science, July 1841, *p.* 480.

20.—NEW PLESSER AND PLESSIMETER.

By John Burne, M.D., Fellow of the Royal College of Physicians; Physician to the Westminster and Magdalen Hospitals, &c.

[Percussion may be employed either mediately or immediately, as is well known to every one. The immediate percussion, as used by Laënnec, by means of the three fingers supported by the thumb, requires the greatest nicety of adaptation, and unless very carefully and skilfully executed will only deceive the practitioner. On many accounts the mediate percussion as used by Piorry is more to be depended upon, especially when used by those who are not thoroughly masters of the practice; which must include the great majority of our profession.

Dr. Burne says:]

The ivory plate employed by Piorry was made trial of by myself for a considerable time, but finding it difficult to hold in many positions of the chest, and painful to strike when it was necessary to examine the whole chest, perhaps of several

patients in quick succession, in hospital practice, I relinquished it in favour of the circular pieces of sole leather recommended in one of the periodicals several years ago. These pieces of sole leather, about one inch and three-eighths in diameter, rounded at the edges, answer well; one piece held in the left hand being placed flat upon the chest, and struck by the other held perpendicularly, that is, edgeways, in the right hand. Sole leather is the most agreeable and the best adapted medium for percussion that I have made trial of, and is adopted in the instrument I am about to reccommend. Caoutchouc I have found unfit, and cork in no way desirable.

The instruments in question are two—a *plesser* and a *plessimeter*. The plessimeter consists of a circular piece of sole leather, full one inch and a quarter in diameter, fixed in a steel stirrup by means of screws at the ends of the cheeks; and to the head of the stirrup is attached a handle, partly of steel, partly of wood; the whole about eight inches long. The screws admit of the free motion of the piece of leather upon its axis in the stirrup, by which means it can adopt itself to any part of the chest at any inclination.

The plesser resembles a hammer; the head formed of a piece of solid steel nearly cylindrical, having one end bored to admit a cylinder of sole leather, of which the extremity projects out half an inch, and is slightly conical, like the end of the fore-finger. It is with this cylinder of leather that the horizontal circular piece in the plessimeter is struck.

The method of using these instruments is simple. The plessimeter, held in the left hand, is applied to the chest with moderate pressure, care being taken that the whole surface of the circular leather is in exact and equal contact with the skin; it is then struck perpendicularly with the plesser, held in the right hand, with a force proportioned to the thickness of the integument and muscle covering the parts of the chest percussed. The essential precautions of Laennec—that the skin be equally stretched on both sides; that the rib be not struck on one side, and the intercostal space on the opposite; that both sides be struck with equal force—are easily observed; as well as the additional one, that the plesser should always fall perpendicularly upon the plessimeter.

By the aid of these instruments every region of the thorax will be percussed with facility; an exact comparison of the

resonance of relative points or regions of both sides can be instituted; and resonance can be elicited from the parts most thickly covered, not with muscle only, but with the scapula, and even with the dress. The dexterity acquired by habit is necessary to regulate the force of the stroke, and to adapt it to the various regions of the chest. The less the force with which the degree of resonance can be determined, and the greater the delicacy with which it can be applied, the better.

Medical Gazette, June 11, 1841, *p.* 468.

21.—TETANUS CURED BY TOBACCO.

By H. Bullock, Esq., Uxbridge.

[The following case relating to this dreadful disease is interesting.]

George Clarke, aged 33, a healthy labourer, of tolerably regular and temperate habits, was admitted as a patient of the Uxbridge Dispensary, labouring under symptoms of tetanus, on Thursday the 13th of May. Upon entering his apartment I found him lying in a state of opisthotonos, with his countenance peculiarly characteristic of the disease, the paroxysms occurring about once in three minutes, when the pain was most agonizing, whilst during the interval even the muscular rigidity was intense, the perspirations profuse, the function of deglutition was performed with the utmost difficulty, and never without producing a spasm.

The history of the case, as obtained from the patient and his wife, is, that six weeks ago he received a blow on the left side, between the lower rib and the crista of the ilium, and that he has had pain in that situation ever since, though not sufficient to incapacitate him for his ordinary occupation of a labourer until Tuesday (two days before I saw him), when he complained of stiff neck and sore throat, with an almost entire inability to swallow, which symptoms have increased up to the present time. His pulse is 80, and regular. Firm pressure over the seat of the accident creates no further pain than when applied to any other portion of the abdominal muscles, which always has the effect of exciting a paroxysm; nor is there any perceptible fulness there. The trismus admits of the separation of the jaws to an extent of about the third of an inch. His

respiration is hurried, and he describes a constant and severe pain in the site of the diaphragm, extending from the ensiform cartilage to the spine. I now prescribed—

℞. Hyd. Chlor., Ext. Coloc. Co. aa. gr. v.: Ol. Croton. ♏j. ft. pil. ij. st. sumend.

℞. Tabaci Foliorum, ʒss.; Aquæ ferventis, ℥ix. Macera per quartam horæ partem; et cola ft. enema statim injiciend.

Evening.—The remedies have had the desired effect of removing from his bowels large, black, and scybalous evacuations. There had been no collapse peculiar to tobacco; and the man's sufferings appeared rather enhanced than alleviated since my visit in the morning.

Enema repetatur sextâ quaque horâ.

℞. Quinæ Disulph., Ferri Sulph., Zinci., Sulph. aa gr. ij.; Acid. Sulph. Dil.; ♏v. ex Mist. Camph. 3tiâ quâque hora. Brandy in arrow-root and strong beef-tea.

I will not render the perusal of the case wearisome by a narration of the daily reports and slighter signs of amendment and alterations, but will merely state the general outline. The above plan having been rigidly adhered to for three days, the patient had very materially improved, the paroxysms occurring about every twenty minutes, when they were shorter in duration and less in severity. There is great permanent rigidity of the whole muscular system. The trismus has so much diminished as that the first joint of the index finger can be now easily admitted into the mouth; there is yet extensive opisthotonos; his countenance has very much improved, his perspirations lessened, his breathing is not so much oppressed; and he is now able to sleep for half an hour at a time: his pulse remains the same, except at the period of a paroxysm, when, of course, it becomes disturbed; however this shortly subsides. The tobacco produced the usual symptoms of excessive prostration every time it was administered, which generally continued for two hours, with the exception of the first three, when there was no sensible effect. This agent was now omitted, and he was to continue the tonic with half a pint of brandy per diem, and

Hydr. Chlor., Extr. Coloc. Co. aa. gr. v.; ft. pil. ij. alt nocte.

5th day.—Since the last report, that of the third day, all the symptoms have returned, and in a more aggravated form than previously, the jaws being perfectly clenched, and his pulse quick and feeble. Nothwithstanding this depressed state of the circulation, the enemata were again ordered, to be injected every eight hours; and after the two first he began to improve; if however, from any accident a longer interval were allowed to elapse, the spasm and profuse perspiration immediately increased. This treatment, omitting the pills, was diligently persevered in for four days without intermission, and with the best effect; then the tobacco was discontinued gradually.

12th day.—He is now very much better, indeed there is scarcely any spasm, and he is able to open his mouth without restraint. He was desired to continue his medicine three times a day, with calomel and colocynth every alternate day. Port wine, a pint daily, ale and mutton chops.

21st day.—The man is quite well, and able to walk out, merely suffering from debility. Mr. James, who witnessed the case throughout, also observed the very remarkable relapse on the omission of the tobacco, and the immediate amendment on its renewal.

I have termed this case one of idiopathic tetanus, merely because it is not one of visible traumatic. From the fact of there having been pain in the situation of the blow ever since its infliction, I am disposed to think some injury was sustained, whether by nervous filament, muscular fibre, or fascia, is uncertain; but probably there was partial rupture of one or more tissues, which I apprehend in a peculiar state of constitution would be inadequate to excite that violent form of reflected constitutional irritation which we designate tetanus. But the treatment is what I am anxious should attract particular attention. I am aware I have no new remedy to suggest; indeed I should search the Pharmacopœia in vain, were I to attempt to find a remedy which had not been employed in the treatment of tetanus. Tobacco, then, I consider our sheet anchor in arresting this formidable disease, but it must be employed with a decision and boldness commensurate only with the fatality of the malady and the extreme urgency of the case. The disease being so rapidly destructive, our time and field of action are very limited; hence I have been induced to use this desperate remedy with a fearless perseverance, as possessing the peculiar

property of most powerfully affecting the *entire* system, desiring at the same time to fortify the nervous system by tonics and stimulants, also to introduce as much support as possible by means of the strongest animal broths and jellies; for the effect of the remedy, I conceive, as well as that of the disease, upon the vital powers, would tend to render the support imperative; nor is there any thing incompatable in this mode of treatment.

It is worthy of remark that the patient has never experienced any of the original pain in the side since the appearance of the tetanic symptoms.

Medical Gazette, July 2, 1841, *p.* 582.

22—ON VACCINATION AND SMALL-POX.

By George Gregory, M.D., Fellow of the Royal College of Physicians, and Physician to the Small Pox and Vaccination Hospital, St. Prancas.

[We noticed in our second volume, Article 85, the opinions of Dr. Gregory with respect to this subject; but as this gentleman has just published an excellent paper on the same subject in the last volume of the Medico Chirurgical Transactions, we think it will be interesting to the reader once more to place the views of so eminent an authority before him. It will be remembered that an impression has long prevailed that the variolous and vaccine poisons are the same. Dr. Jenner himself was the first to state this. He maintained that the vaccine was the *primary* and the variolous the *secondary* form of the virus. Dr. Gregory states as follows:]

The doctrine of the identity of the variolous and vaccine poisons has again been brought into notice by the interesting experiments of Mr. Ceely, of Aylesbury. The remarkable fact that the mucous surfaces of the cow will receive the poison of small-pox, and convert it, in eight days, into the vaccine, gives a strong *primâ facie* colouriug to the hypothesis, which indeed, by many, is now considered as established beyond the possibility of doubt or cavil. A doctrine so important as that of the *Identity of the Vaccine and Variolous Poisons*, involving, as it does, such important pathological results, ought not, however, to be received without inquiry. I proceed, therefore, briefly to investigate the grounds on which it stands.

The facts regarding the origin of vaccinia, so far as they are yet known to us, are these. The morbid secretions from the cow, which possess the singular properties of transplantation to the human frame, of exciting there a like disease, and subsequently of protecting the human body, to a certain extent, from the assaults of small pox, may be produced in that animal in four modes.

1. They are generated spontaneously in the cow, under certain circumstances of soil, season, and locality. Such diseased secretions are often met with in cows soon after parturition, in the spring season, and when feeding upon young grass. But they arise also spontaneously from other and less known causes, and the disorder spreads like other epizootic maladies. It was this form of vaccine disease which Jenner chiefly studied.

2. The very same malady, developing the very same morbid secretion, is often observed to spread *by contagion*:—that is, by the application of the diseased secretion, thus generated, to the teats of healthy cows, differently circumstanced, by the hands of the milker.

3. The same morbid secretion, possessed of the same qualities, may be, and frequently has been, generated in the teats of the cow, by the application to them of the matter formed by the heel of the horse, when affected with the disorder called by farriers *the grease*. This *greasy* matter may also be transplanted to man directly, without the intervention of the cow, proving that the anti-variolous property does not depend on any peculiar change which the virus undergoes while passing through that animal.

4. The same morbid secretion may be excited artificially in the cow by applying to the teats, or the mucous surfaces of the vagina, vaccine lymph from the arm of a child, even though twenty years had elapsed since that lymph had been humanized or assimilated to the human constitution.

This curious fact was first determined at Paris, in 1836, by M. Bosquet, the intelligent chief of the National Vaccine Establishment of France. The researches of Mr. Ceely have fully corroborated the truth of this statement, and I have frequently seen, both at Paris and at the Small-Pox Hospital of London, this species of lymph, the *Retro-Vaccine* or *Vaccine Renouvellée*, as it is called, in use, and producing the most satisfactory results.

To these four modes of exciting that kind of morbid secretion in the cow, which we call vaccinia, (one constitutional and three artificial,) the labours of Mr. Ceely have now added a fifth. He has shown that the very same object may be obtained by applying to the mucous surfaces of the cow the matter of human small-pox. The vessels of the part are thereby excited to the production of a fluid or humor, identical in all its properties with that which arises from a constitutional and febrile disturbance in the cow's system, from contagion, from the matter of *grease*, or the long-humanized vaccine virus.

When we consider that five modes of producing this morbid secretion in the cow are now known to exist, it is not unreasonable to suppose that others may hereafter be discovered. In this state of our knowledge, then, surely we cannot be justified in assuming the fifth and the last discovered of the whole, as the most important, and as affording the true clue to the mystery of vaccine protection. We should reflect that Mr. Ceely's experiments have entirely set aside Dr. Jenner's notion that vaccinia was the original or primitive poison, which time and fortuitous circumstances had aggravated into the malignant or secondary form, which we call small-pox. They have proved (if indeed they have *any* bearing on the intimate nature of these poisons) that small-pox is the *primary*, and cow-pox the *secondary* form. But when we further reflect on the absence of a contagious principle in vaccinia, and the remarkable fact that febrile disturbance is not essential to its perfect development, we shall probably be nearer the truth in saying that the vaccine is a poison *sui generis;* that its relation to variola is still hypothetical; that the real and intimate nature of the protection which it affords is still unknown to us; and that a thorough acquaintance with its anti-variolous powers must be derived, not from analogy, but from an extended and careful observation of facts, continued through a long series of years.

Medico Chirurgical Transactions, Vol. 24, p. 24.

23.—EFFICACY OF OPIUM INJECTIONS IN CASES OF NERVOUS EXCITEMENT.

By A. B. Maddock, M.D.

[We think the use of opium in the form of injection too little

attended to in the present day. The following case is related by Dr. Maddock.]

Mrs. R——ts, ætat 27, of a weak and nervous constitution, was delivered September 6th, of her third child; the presentation was natural, delivery quick, and unattended with any untoward symptoms. Early in the morning of the 8th, I was hastily summoned, and found her labouring under great pain in the head, and sickness, accompanied with a vacant and frightened look, turgid conjunctiva, impeded motion, and uneasiness of the limbs, imperfect speech, weak and irregular pulse. Upon inquiry of the nurse, I ascertained that my patient had been subject to "fits" in both her previous confinements, and was shown the prescriptions of the physician who formerly attended her; by which it appeared, that sedatives of every kind and form had been employed, together with venesection and cupping, without any benefit being derived from them.

Under these circumstances, I immediately resorted to the opiate injections. I prescribed as follows:—

R. Tincture of Opium, m. xviij.; Common gruel, ℥iv.
Mix and make into an injection to be administered immediately per anum, and repeated every 3 hours.

She remained in a state of insensibility and extreme excitement, alternately laughing and crying, for nearly two hours, when consciousness gradually began to return, and in six hours (two enemas having been given) she was sensible, but felt "very nervous." Notwithstanding these favourable results, I ordered the injections to be regularly continued for the next six hours.

September 9th:—Slept tolerably well last night; has had no return of the fits, does not feel quite so nervous, and is much improved in every respect.

Medical Times, Aug. 21, 1844, *p.* 245.

[Dupuytren is stated to have been one of the first who administered opium as an injection in cases of nervous excitement, produced by disease and by operations. Dupuytren explains the curious fact that a small quantity of opium taken into the stomach produces no effect, whilst the same quantity is very efficacious when introduced into the rectum, in this way, viz. that when administered by the rectum, the digestive powers do not interfere, and the medicine is consequently absorbed unaltered into the system.]

24.—COLICA PICTONUM TREATED WITH WARM WATER.

By John Wilson, M.D., Physician to the Middlesex Hospital.

[We all know the difficulty which frequently arises in this complaint in procuring a free evacuation from the bowels. The following case related by Dr. Wilson was relieved in a very simple and efficacious way, and will no doubt be more generally adopted. The patient, Matthew Proctor, aged 45, was a plumber and painter; his bowels were most obstinately costive for several days.]

On admission he was put into a warm bath, and when he had been in it for some time, an elastic ejecting tube was given him, with directions to employ it in trying to inject the water of the bath gradually up the intestines, and to persevere, should he feel no pain nor unpleasant sensation, till he felt a sensation of fulness of the abdomen. In this he succeeded while he continued immersed in the bath; shortly after, and before he quitted the bath, he had an evacuation of lumpy fæces. After leaving it he was purged four or five times, and relieved from the pain. The next day he had an ounce of castor oil, with ℥xx. Tinct. Opii, and a sinapism to the abdomen. The third day the bath and enema while in the bath were repeated; after which, while he remained in the hospital, his bowels never required more than the mistura alba (sulph. mag. ʒss., carb. mag. gr. v., in mint water,) two or three times a-day.

21st.—Free from pain; bowels regular; no complaint.

Medico Chirurgical Transactions, Vol. 24, p. 179.

25.—TREATMENT OF PNEUMONIA.

By Dr. Watson, Lecturer on the Practice of Medicine in King's College, London, &c.

[Blood-letting, tartarized antimony, and mercury, are stated by Dr. Watson to be the three great remedies in this dangerous disease; and this opinion accords with that of most other eminent men; for although every one may not use the tartarized antimony and mercury in the same way, yet the general princi-

ples of treatment will be found nearly to correspond. However much we depend upon bleeding in the early stages of the treatment, a time arrives when it is no longer admissible, and is even positively hurtful.]

We want some remedy, therefore, to assist the lancet, or to employ alone when the lancet can do no more; and we have two such, in *tartarized antimony* and in *mercury*. The tartar emetic plan I believe to be the best adapted to the first degree of the inflammation—that of engorgement; and the mercurial plan to the second—to that of hepatization.

I need not tell you that the tartarized antimony is not given in this disorder with the object of producing vomiting. It is a very curious thing, that although when administered in a considerable dose, its first effect is often that of exciting sickness, and perhaps purging, a repetition of the same dose is, in the majority of cases, at length borne without any farther vomiting. The stomach comes to *tolerate* the medicine, as our continental brethren say; and then its beneficial influence upon the disease is no less marked than when nausea and vomiting take place. Some patients do not vomit at all; others, the majority in fact, vomit two or three times, and then *tolerance* is established. If the sickness and purging go on, they may be checked by adding a few drops of laudanum to each dose. Dr. Thomas Davies, who had tried this remedy largely, and, as he tells us, with great success, gives the following as his own plan of administering it, and perhaps it is as good as any. After free bleeding, he begins with one-third of a grain of tartar emetic in half a wineglass-full of water, with a few drops of laudanum or syrup of poppies. Two doses of this strength he gives at the interval of one hour from each other. He then, if the patient does not vomit, omits the opium, but continues it if he does, doubling, however, the quantity of the tartar emetic, giving two-thirds of a grain for two successive hours; and in this way he goes on, adding a third of a grain every two hours, until he reaches two grains every hour. This last quantity he has not exceeded, and he says that he has continued it for many days without producing any injurious effect.

Under this plan of treatment the symptoms will often undergo a marked change for the better, in three or four hours. Sometimes, however, the relief is not conspicuous for twenty-four or

even for thirty-six hours. He states, and this is accordant with my own experience of the remedy, that the tarter emetic always acts best when it produces no effect except upon the inflammation itself; *i. e.* when it does not produce vomiting, or purging, or a general depression of the powers of the system. This is an important practical remark, because many persons have supposed that it subdues the disease only when it previously gives rise to these effects. I consider this testimony of Dr. Davies to the power of the tartarized antimony in controlling inflammation of the lung the more valuable, because he informs us, that before he had occasion to see its admirable effects in the first stage of pneumonia, he had been in the habit of trusting to the free use of mercury, after due depletion.

When the dyspnœa has been put an end to by antimony thus exhibited, the medicine may be intermitted; and if the inflammation show any disposition to rekindle, it must be again extinguished by repetition of the tartar emetic.

When, however, the inflammation has reached the second stage, that of a solidification, mercury is more worthy of confidence, in my opinion, than tartarized antimony. And I have little or nothing to add to what I formerly said in respect to the mode in which it ought to be administered. The object of giving it is to make the gums tender; and it is expedient to do this as speedily as may be. Small doses of calomel repeated at short intervals—a grain every hour, or two grains every two hours, or three grains every three hours—combined with so much of laudanum or of opium as may be requisite to prevent it from running off by the bowels—offer the most certain way of accomplishing our object. If the bowels are irritable under the calomel, blue pill or the hydrargyrum cum cretâ may be substituted for it with advantage: and if the internal use of mercury be any how contra-indicated, or if it appears slow in occasioning its specific effect, the linimentum hydrargyri may be rubbed in, or the strong mercurial ointment.

Many persons, I am persuaded, are saved by treatment of this kind, pushed to slight ptyalism: the effusion of lymph, tending to spoil the texture of the lung, is arrested; and the lymph already effused begins to be again absorbed: and the ease and comfort of the patient, as well as the alteration for the better of the physical sounds, attest the healing qualities of the remedy.

Medical Gazette, Oct. 15, 1841, *p.* 103.

26.—ON THE USE OF SETONS IN PARAPHLEGIA, &c.

By Marshall Hall, M.D., F.R.S., &c.

[Dr. Marshall Hall strongly recommends the use of setons in preference to issues, on the course of the spine, in paraphlegia, and in acute or chronic local or limited inflammation of different parts, as in hepatitis and nephritis. In cases of diseases of the spinal marrow, with paraphlegia or paraphlegic spasm, setons are more especially valuable: but Dr. Hall looks upon the usual seat of application of these setons as improper. He thinks that the great error committed by medical men is the applying the seton *below* the seat of the disease. "The spinal nerves proceed for some distance, from above, directly rather than obliquely, downwards, and the seat of the disease is *at* or *above* their junction (insertion or origin) with the spinal marrow."]

Bearing these two principles in mind then, viz. that ample setons afford a more efficacious counter-irritation than issues, and that they ought to be applied higher along the spinal column than has been usual, I think we have a new mode of treatment for this formidable class of diseases.

These setons should, besides, be larger than usual. They should be three-fourths of an inch in breadth, and extend through two inches in length, be inserted on the level with and above the supposed seat of the disease, (the anatomy being consulted,) and be four or six in number, two or three being instituted on each side of the spinal column. Acting on this principle, I had, five days ago, the pleasure to receive the most satisfactory account of a patient affected with paraphlegia, whom I had seen at Lohan, in Essex, in consultation with Mr. Gross.

I repeat, and beg to conclude by repeating, that I believe counter-irritation applied along the spine has failed, because it has been applied below the seat of the disease; and that to be efficacious, it must be both more efficient in itself, and applied with greater regard to the anatomy of the spinal marrow and nerves. The precise spot for their application must be left to the well-informed practitioner. I need scarcely remind my reader, that the persistence or cessation of all reflex actions, will determine whether our remedies should be applied above or

below the origin of the cauda equina, above or below the last dorsal vertebra.

Lond. and Edin. Monthly Journal of Med. Science, Nov. 1841, *p.* 805.

27.—ON ASPHYXIA, AND ON THE RESUSCITATION OF STILL-BORN CHILDREN.

By John Snow, Esq., M.R.C.S.

[In this paper of Mr. Snow, read before the Westminster Medical Society, the opinions of the celebrated Dr. Edwards are brought forward respecting the relative importance of applying warmth or cold to the surface of bodies in a state of asphyxia, and especially in cases of still-born children. It may startle the generality of practitioners to be informed that the hot-bath so commonly used in these cases seems to be prejudicial. It may indeed keep the surface in a certain degree of heat, but according to Dr. Edwards, this heat of the body only the more incapacitates the system to bear up against a continued state of asphyxia. Mr. Snow says:]

A consideration of great practical importance in the study of asphyxia is the influence of the temperature of the medium in which it takes place. Dr. Edwards, of Paris, by a most extensive and beautiful set of experiments, has proved that throughout the animal kingdom asphyxia is much more sudden at a high than at a low or moderate temperature; and that even cold-blooded animals, which will linger for hours deprived of oxygen at a low temperature, will die as quickly as mammalia or birds in water at blood heat: even fishes will die in a few seconds, or at most two minutes, in water at 100° Fahrenheit, that has been deprived of its air by boiling, although this temperature would not injure them with sufficient air. He found that new-born mammiferous animals die most slowly in water at about 60 degrees, which is ordinary cold water, and that they die much more quickly as the water approaches blood heat. Dr. Edwards advises that persons in the state of suspended animation should, amongst other measures, be exposed to the cool air; and that the application of heat should be avoided, unless indeed just a momentary application, to endeavour to arouse sensibility. The Royal Humane Society, however, directs the application of warmth

in all practicable ways, not only as an auxiliary to artificial respiration, but even to commence with, if the means for the latter are not in readiness; and most authors, I believe, coincide with the views of the Humane Society. Dr. Edwards considers it is by its effects on the nervous system, and through that on the heart, that a high temperature produces its effects. I think that, although the nervous system may be affected, and is probably the channel of its impression, yet that the deleterious effects of an elevated temperature, when respiration is stopped, depend on its stimulating the capillary circulation of the system, and thus promoting the de-oxygenation of the blood, that change which is antagonistic of respiration, which rules its extent under all circumstances, and which, in fact, constitutes the necessity for having a respiration. But whatever view we take of this point, the fact of the influence of temperature on asphyxia proves that the application of heat ought to be avoided until respiration is thoroughly established, when it will no doubt, be a useful auxiliary to restore sensibility and renovate the patient.

The number of children that die of asphyxia at the time of birth is very considerable. Writers on midwifery have stated that one-twentieth of the children brought forth are still born, and of these a large proportion are asphyxiated, from various causes, often at the very moment of birth. The first measures that are generally and very properly adopted, when a child is born in a state of suspended animation, are to admit the cool air to its skin, to dash a few drops of cold water on it, and use similar means to arouse sensibility, more especially that of the nerves of respiration. From the great vascularity and sensibility of the skin, and the thinness of the cuticle of new-born children, great benefit may be expected from the access of air to the surface of the body. Immersion in warm water is sometimes had recourse to, and I have seen it completely successful in two or three instances, after the means just enumerated had failed; but this is a dangerous measure, one which, if it do not succeed, will quickly extinguish any possibility of recovery which may exist, as we have already seen. The great object in this, as in every case of asphyxia, is to establish respiration; and if the patient cannot be roused to perform natural breathing, artificial respiration must be had recourse to as quickly as possible.

Medical Gazette, Nov. 5, 1841, *p.* 224.

28.—FORMULA FOR OLEUM CANTHARIDIS AND EMPLASTRUM CANTHARIDIS.

Since the reading of Mr. Redwood's paper on Vesicating Applications, we have be been favoured with these forms by Mr. Joseph Smith, who states that he has found the preparations efficacious, having made them by way of experiment:—

Oleum Cantharidis. ℞. Pulv. Cantharidis, ℥iv.; Ol. Olivæ, ℥viii. Macera cum leni calore per dies quatuor-decem subinde agitans, tunc exprime.

Emplastrum Cantharidis.—℞. Ol. Canthaidis, ℥iv.; Ceræ Flavæ (vel albæ) ℥iiij.; Resinæ, ℥ss. M. ft. Emplast. s. a.—*Phar. Trans.* Oct.

Medical Gazette, Nov. 5, 1841, *p.* 240.

29.—ON THE PREPARATION OF VINUM FERRI.

By M. Donovan, Esq.

The virtues of this preparation, the first metallic medicine on record, have been known to mankind since the time of the Argonautic expedition: its medicinal character has therefore stood the test of experience during 3100 years,—and it is now more in use than it has been for a long period. The will of the profession retains it, although it is expunged from the three British Pharmacopœias; and a medicine that has withstood such vicissitudes cannot be destitute of virtue. Why, then, is it expunged? why is there so much difference of opinion? The answer is, because there are such differences in its strength, and in the modes of preparation.

I have, by a very simple process, removed all uncertainty from this preparation, and now obtain it always of the same strength, containing an effective quantity of iron of an agreeable flavour, and still possessing all the aroma of the wine. The process is:—Take of the best hock one pint; common rust of iron of the shops, well levigated, two ounces. Introduce both into a matrass, which plunge into a water bath maintained at the temperature of 100°. Constantly agitate the matrass for an hour; then remove it from the water, and the next day filter. The colour of this vinum ferri is a very deep greenish

brown, almost black when the volume is great; its taste is ferruginous, agreeably and highly vinous; it produces a pleasant warmth in the stomach, and never sickens. In its effects it must be tonic, diuretic, emmenagogue, anthelmintic, and carminative. It does not, in a moderate dose, excite. No other wine than hock will afford a preparation possessing these virtues. The dose for an adult may be three or four drachms thrice a-day; in smaller doses it is of little use. If it is to be exhibited in combination with a bitter, it agrees well with calombo or gentian. By this method, in one day, we obtain a far better preparation than is procurable by the processes of the pharmacopœias in two months. The iron exists in it chiefly in the state of protoxide.—*Dublin Medical Press, June* 23, 1841. *Quoted in Brit. and For. Med. Rev., Oct.,* 1841.

Lond. and Edin. Monthly Journal of Med. Science, Nov. 1841, *p.* 840.

30.—TREATMENT OF ACUTE RHEUMATISM WITH LARGE DOSES OF NITRATE OF POTASS.

Dr. Brocklesby seems to have been the first to point out the curative efficacy of saltpetre in the treatment of acute articular rheumatism. In his economical and medical observations, published in 1764, he has explained the practice which he found to be most useful. After taking a free bleeding from the arm, when the patient is young and robust, he orders a very copious allowance of warm gruel, in which from one to two drachms of the salt have been dissolved; the patient is to take large draughts of this drink at short intervals. He has given as much as from six to ten drachms of the nitrate dissolved in from three to six quarts of the gruel, during the course of twenty four hours. This mode of treatment rarely fails in producing a great relief of all the symptoms in two or three days; and very often a complete cure of the disease is effected, without having recourse to any other mode of treatment, within a week from commencing the treatment. The nitred diluent usually causes very profuse perspiration, and generally also acts upon the bowels; if it does not, an aperient enema should be given occasionally.

It is to be observed that Dr. Brocklesby's remarks are drawn from practice in military hospitals, where the patients are usually robust and healthy.

In 1772, Dr. Macbride, in his introduction to the theory and practice of medicine, recommended the same mode of treatment. Two years later Dr. William White (Observations on the Use of Antimonial Preparations) makes the following remarks on the effects of large doses of saltpetre:

"The employment of this salt, after blood-letting, is very useful in the treatment of acute rheumatism; but it must be given to the extent of an ounce in the twenty-four hours, if the vascular irritation be considerable; small doses are of little service. In many cases of chronic rheumatism also, it is of great efficacy. Administered in the dose of from one ounce to an ounce and a half in twenty-four hours, it often cures the most severe cases of the disease, which may have resisted every other mode of treatment."

The use of the nitrate, nothwithstanding such decided recommendations, fell into neglect, and although noticed by M. Bosquillon in his translation of Cullen, it was not till 1832 when it was again brought to notice by M. Gendrin. One of his *internes* at the Beaujon Hospital, M. Aran, has brought together the reports of a dozen cases treated with the nitrate of potash in full doses, dissolved in copious draughts of a mild demulcent diluent, very nearly according to the directions of Dr. Brocklesby. The dose of the salt varied from four to eight or ten drachms in the course of twenty-four hours. The average duration of the treatment seems to have been about a week. In many of the cases there were well-marked symptoms indicating disease of the heart; these symptoms usually subsided with the suffering in the joints.

The *modus operandi* of the remedy was usually as a powerful diuretic and diaphoretic: occasionally, too, it acted on the bowels.—*Journal des Connoissances Medico-Chirurgicales.*

[The Editors of the Medico Chirurgical Review remark on this subject:]

We are generally pleased with the *reproduction* of any of the remedies which were much used and recommended by the sound practical physicians of the last century, as most assuredly these gentlemen were much less influenced by pathological

theories in their treatment of diseases than most of the writers of modern times. That full doses of the nitrate of potash should act beneficially in acute rheumatism, we are quite prepared to expect: for it will he found that all powerful evacuant remedies, more especially those which act on the skin and kidneys, are more or less useful in this disease. One of the most generally useful of all remedies, in a large proportion of rheumatic cases, is the mistura guaiaci of the London Pharmacopœia; and it is observed that it is usually most beneficial when it acts on the bowels and kidneys. The vinum colchici, or the Dover's powder, may often be added with much advantage to it. Moderate blood-letting, and the exhibition of calomel at bed time, with or without opium, should seldom be neglected at the same time.

Medico-Chirurgical Review, Oct. 1841, *p.* 525.

31.—ON THE HYDROCEPHALOID DISEASE.

By Dr. Marshall Hall, F.R.S., L. & E., &c.

Dr. Hall fairly vindicates his claim to originality in the description of this complaint.

The causes are thus mentioned. The exhaustion on which it principally depends, has its origin, in early infancy, chiefly in diarrhœa, or catharsis; in the later periods of infancy, in the loss of blood, with or without the relaxed or evacuated condition of the bowels. The state of diarrhœa has generally depended upon improper food, or intestinal irritation. It has very frequently succeeded to weaning, or to other changes in the diet, or to constipation. The catharsis has followed the administration of an aperient medicine, which, at such a moment of disorder of the stomach and bowels, is apt to act excessively. The exhaustion from loss of blood generally follows the inappropriate or undue application of leeches, or the use of the lancet. Dr. Hall, indeed, gives an useful caution. Of the whole number, he says, of fatal cases of disease in infancy, a great proportion occur from this inappropriate or undue application of exhausting remedies. This observation may have a salutary effect in checking the ardour of many young practitioners, who are apt to think that if they have only bled, and purged, and given calomel enough, they have done their duty; when, in

fact, in subduing a former, they have excited a new disease, which they have not understood, and which has led to the fatal result.

Dr. Hall divides the affection into two stages—the first that of irritability, the second that of torpor.

In the first stage, he goes on to observe, the infant becomes irritable, restless, feverish; the face flushed, the surface hot, and the pulse frequent; there is an undue sensitiveness of the nerves of feeling, and the little patient starts on being touched, or from any sudden noise; there are sighing and moaning during sleep, and screaming: the bowels are flatulent and loose, and the evacuations are mucous and disordered.

If, through an erroneous notion as to the nature of this affection, nourishment and cordials be not given, or if the diarrhœa continue, either spontaneously, or from the administration of medicine, the exhaustion which ensues is apt to lead to a very different train of symptoms. The countenance becomes pale, and the cheeks cool or cold; the eyelids are half closed, the eyes are unfixed, and unattracted by any object placed before them; the pupils unmoved on the approach of light; the breathing, from being quick, becomes irregular and affected by sighs; the voice becomes husky, and there is sometimes a husky, teasing cough; and, eventually, if the strength of the little patient continue to decline, there is a crepitus or rattling in the breathing; the evacuations are usually green; the feet are apt to be cold.

A similar train of symptoms occurs in other cases, in which the strength of the little patient has been subdued and the vascular system exhausted by the abstraction of blood. In both cases, leeches are sometimes again applied to subdue this new form of disease, under the erroneous notion of a primary cerebral affection. This measure infallibly plunges the little patient into imminent, if not irretrievable danger. Sometimes the sinking state goes on in spite of every appropriate remedy. Stimuli, if efficacious, reduce the frequency of the pulse, and restore the wonted warmth, colour, expression, and smiles to the countenance.

Dr. Hall particularly insists on a close observation of the condition of the cheeks, in regard to colour and warmth. That condition, he observes, may be considered as the pulse of very young infants, indicating the degree of remaining power, or of

exhaustion. In the present case, especially, there is no symptom so important, so distinctive. It is from the condition of the cheeks, in conjunction with a due consideration of the *history*, that the diagnosis of this morbid state, and the indication of the appropriate remedies, are chiefly to be deduced. The general surface, and especially the hands and feet, also afford important sources of information as to the condition of the nervous or vital powers. Next to these, the degree of frequency of the pulse, and the character of the breathing, are points of the greatest importance; during the stage of irritability, the breathing is quick; during that of torpor, it is slower, irregular, suspirious, and, finally, crepitous; the pulse changes in its beat, from being full becoming smaller, but retaining, perhaps, its former frequency.

We should be especially upon our guard, not to mistake the stupor, or coma, into which the state of irritability is apt to subside, for the natural sleep, and for an indication of returning health. The pallor and coldness of the cheeks, the half-closed eye-lid, and the irregular breathing, will sufficiently distinguish the two cases.

The following is Dr. Hall's methodus medendi. The remedies, he says, for this morbid affection are such as will check the diarrhœa, and afterwards regulate the bowels, and restore and sustain the strength of the little patient. With the first objects, it may be necessary to give the tinctura opii, and chalk, and, afterwards, the pilula hydrargyri, rhubarb, and magnesia; with the second, sal volatile, but especially brandy; and proper nourishment, are to be given according to circumstances. But in this, as in many cases of infantile disorders, the milk of a young and healthy nurse is the remedy of most importance; in the absence of which, ass's milk may be tried, but certainly not with the same confident hope of benefit.

Five or ten drops of the sal volatile may be given every three or four hours; and twice or thrice in the interval, five or ten drops of brandy may be given in arrow-root done in water. As the diarrhœa and appearances of exhaustion subside, these remedies are to be subtracted, the bowels are to be watched and regulated, and the strength is to be continually sustained by the nurse's or ass's milk. The brandy has sometimes appeared to induce pain; sal volatile is then to be substituted for it; a dose of magnesia has also appeared to do good.

For the state of irritability, the warm bath is a remedy of great efficacy. For the coma, a small blister, or sinapism, should be applied to the nape of the neck. A state of exhaustion of the general system, as I have observed elsewhere, by no means precludes the possibility of real congestion of the brain. It rather implies it. In extreme cases, there are not only the symptoms of cerebral congestion during life, but effusion of serum into the ventricles of the brain is found on examination after death.

In every case, the extremities are to be kept warm by flannel, and the circulation should be promoted in them by assiduous frictions. It is of the utmost importance carefully to avoid putting the little patient into the erect posture. A free current of air is also a restorative of the greatest efficacy.

Medico-Chirurgical Review, Oct. 1841, *p.* 322.

32.—BELLADONNA IN CASES OF ILEUS.

By M. Becker.

M. Becker has employed an injection of belladonna with the best effects in a case of ileus. A woman, forty-eight years of age, was seized, without any apparent cause, with constipation and vomiting; the ejected matter became gradually more foul, and at length fæcal matter was thrown up; this state had continued for five days, when M. Becker ordered a lavement, containing four scruples of the belladonna root. The pain of the abdomen, vomiting, &c., soon ceased, and in half an hour the woman passed a stool, with a good deal of blood in it. No narcotic effects were produced by the remedy.—*Gaz. Med.*

Provincial Med. and Surg. Journal, May 15, 1841, *p.* 130.

33.—CONTRACTION OF THE FINGERS CURED BY ELECTRICITY.

By M. Breschet.

C. Leclerc, servant, 19 years of age, was admitted into the Hôtel-Dieu, on the 5th June, 1838, for a burn on the leg, She was ordered to be bled; the *externe* made two incisions, having failed to obtain blood the first time; the patient imme-

diately complained of numbness of the arm, which rapidly increased, and at the same time the fingers became so firmly contracted, that the dresser had great difficulty in withdrawing the rooler which the patient held in her hand. M. Breschet was sent for at once, but thought lightly of the matter: the contraction of the fingers, however, continued in so great a degree, that it was found necessary to place something in the palm of the hand to prevent the nails from wounding it. Every means were used to overcome this contraction of the flexor muscles, without avail: a splint was tried for fourteen days, but as soon as it was removed, the fingers resumed at once their old position; in a word, various remedies were tried for six months, but everything failed. At length M. Breschet resolved on trying the galvanic battery. On the 20th of December a needle was passed into the extensor muscles near the elbow, and another into the back of the wrist; twenty-five and thirty pair of plates were employed, but without effect; the contraction seemed even worse. The needles were now withdrawn and placed, one near the origin of the flexors, the other in the palmar surface of the annular ligament of the wrist; the same strength of pile was used, and to the great surprise of all present, the fingers were gradually extended under the influence of the galvanic shocks; the thumb alone remained flexed. Galvanism was regularly employed every day; on the fourth, the woman could use her index and middle finger freely; on the seventh the ring-finger became free. Unfortunately the woman now left the hospital, and nothing more was heard of her until she came, of her own accord, in the month of July, 1839, to announce that she was quite well. She informed us that for a short time after her departure from the hospital she had the use of her fingers, but the contraction soon returned again. She consulted a medical man, and told him the means from which she received so much benefit before, He tried galvanism also, and after the twelfth application a perfect cure was obtained. She has not suffered any relapse since that time.—*Journal des. Con. Med.*

There are two remarkable points in the history of this case; the sudden appearance of contraction after a wound made by the lancet; and the curious fact that galvanism, instead of increasing the muscular action, had a contrary effect.

Provincial Medical and Surgical Journal, May 15, 1841, *p.* 139.

34.—ACUPUNCTURE OF THE HEART IN APPARENT DEATH.

By Dr. A. Carraro.

Dr. Antonio Carraro informs us, in the *Annali Universali di Medicina,* that he has successfully used *acupuncture* in cases of apparent death. He performed the following experiment before several individuals. An eight days old cat was kept under water till all motion ceased, when the animal was taken out; the tongue protruded from the mouth, and was covered with froth. The extremities were stiff, there was no pulsation of the heart, and every other sign of life was absent. On being cast into the water for the second time, it sank to the bottom. It was then taken out, exposed to the sun, and dried with warm towels. Abdominal frictions were ineffectually practised, and it was not until the lapse of three-quarters of an hour after the disappearance of the signs of life, that acupuncture was had recourse to. A needle was pushed onwards through the heart, until its point rested on the vertebral column. Five minutes had hardly elapsed, when the needle was observed to move, which indicated a movement of the heart. This motion increased, which was soon followed by movements of the upper extremities, then respiration, crying, and lastly movements of the whole body. The animal continued to live and suckled its mother.

This same experiment was frequently repeated with similar effects, from which Dr. Carraro concludes, that puncture of the heart is not only a useful but a safe operation. He concludes his remarks by trusting that his method may be tried in cases of asphyxia.—*Froriep's Notizen, &c.,* vol. xv.

Provincial Medical and Surgical Journal, May 15, 1841, *p.* 140.

35.—ON LARGE DOSES OF IODIDE OF POTASSIUM IN THE LAST STAGE OF ACUTE HYDROCEPHALUS.

By Dr. Roeser.

Dr. Roeser advocates the employment of the iodide of potassium in large doses in cases where the ordinary remedies have failed, where paralysis has already occurred, and death appears

impending. It has been administered in earlier stages of the disease, and in small doses, by other physicians. His prescription for a child two years and a half old was:—

℞. Hydriod. Potassae ʒj. Aquæ Distill. ℥ss. Misce.

Thirty drops to be given every hour in a glass of water.

This was continued for a week, and then for four days more half the quantity was given. When the use of the medicine was begun, the child had been affected six days, with symptoms of hydrocephalus, for which leeches were applied to the temples, cold to the head, and calomel was given in large and frequently repeated doses, without any amendment. On February 12, 1840, the child lay insensible, with pupils fixed and dilated, complete paralysis of the right side, and frequent automatic movements of the left leg and arm. The face was flushed, the body bathed in perspiration, the pulse frequent, and deglutition was accomplished with difficulty. The iodide of potassium was now given as above, and within twenty-four hours a drachm of the medicine had been administered without any perceptible change. On the 14th, it was noticed that the pupils, before much dilated, had become contracted; on the 15th, the plaintive hydrocephalic cry was less frequent, the pupils were neither contracted nor dilated, and the bowels had acted copiously. On the 21st, the child gave evident signs of consciousness, the pupils acted regularly, and the face had an air of cheerfulness. The patient began to move the left arm and left leg, which had lain motionless for a week, when the automatic movements ceased. Paralysis of the right side, however, continued until the 23rd. The iodide of potassium was discontinued on February 21st. A crop of boils now formed on various parts of the body, notwithstanding which, the child continued to recover. In May, it had regained its flesh, was cheerful, and very intelligent.—*Hufeland's Journal, April*, 1840.

Lond. and Edin. Monthly Journal of Med. Science, Oct. 1841, *p.* 748.

36.—TREATMENT OF CHOREA.

By Dr. Hennis Green, Lecturer on the Diseases of Children in the Hunterian School of Medicine.

The remedies which I have seen usually employed at the Children's Hospital in the treatment of chorea, are, 1st, sul-

phureous baths, 2nd, cold baths, and 3rd, the oxide of zinc. The sulphureous baths are composed by the addition of four oz. of the sulphuret of potass to a common bath; the patient may be kept in the bath from half an hour to an hour and a half, and the bath may be repeated once or twice daily, according to circumstances. The use of fifteen to twenty baths, is in most cases sufficient to remove all symptoms of the disease. This method was introduced into practice several years ago, at the Children's Hospital, Paris. by M. Baudelocque, by whom I have seen it employed with very great success. Thus from the month of September, 1832 to January 1833, fourteen girls, labouring under chorea, were treated exclusively with the sulphur baths; of these fourteen, thirteen were perfectly cured, and the mean duration of the patients' sojourn in the hospital was only twenty-four days. Some of the cases which I have just related were extremely severe, yet they were cured within twenty-one days; in one case, ninety-five leeches (in three applications) had been placed along the spine without producing any benefit, when the sulphur baths were employed, and effected a cure in fourteen days.

There are few diseases in which so great a variety of remedial means has been tried as in chorea. Dr. Babington, in an interesting paper, contained in the last number (xiii.) of Guy's Hospital Reports, speaks very favourably of the sulphate of zinc. The French physicians prefer the oxide. Generally speaking, tonic remedies are those on which most reliance should be placed, but I am inclined to think that electricity and the sulphur baths will be found to be the most powerful means that we possess.

Provincial Medical and Surgical Journal, Oct. 30, 1841. *p.* 89.

37.—ON LOCAL BATHS.

By M. Mayor, of Lausanne.

M. Mayor, of Lausanne, has lately presented to the Royal Academy of Sciences, in Paris, an apparatus for bathing any limb, or any part of one, separately, and in any possible position. This apparatus consists of a hollow cylinder of copper, the two extremities of which are provided with caoutchouc discs, each of

which has at its centre a large opening through which the limb is introduced. Varied according to the parts to which they are to be applied, these apparatus form a kind of sleeves, or gloves, or boots according as they have to enclose the arm, the hand, or the foot and leg.

This kind of portable bath has, M. Mayor states, numerous advantages. It is cheap. It permits the limbs to be bathed without obliging the patients to keep in an irksome position. When, for instance, the elbow-joint is to be bathed, two pieces corresponding to the arm and the forearm, may be articulated together, [by caoutchouc tube, we suppose,] so as to be capable of movement on each other, and the patient suspending the apparatus in a sling may walk about, and even make use of the movement of flexion and extension of his arm. Only a small quantity of water is needed, and this advantage, though unimportant in the case of simple baths, is considerable when medicated baths are ordered. This liquid will preserve its temperature a long time, and this, added to the convenience of employing it, will enable the bath to be used longer than is customary. The fluid may be removed or added to by small openings made above and below through the wall of the cylinder. The apparatus may also be used for constant irrigation by making one of these openings communicate with a tube conveying water to the cylinder, and the other one to carry it off.

Medical Gazette, July 30, 1841, *p.* 736.

38.—ON CROUP AND ITS CURE.

By Dr. Grahl, of Hamburgh.

Dr. Grahl calls attention to the employment of arm-baths in croup, the use of which has already been advocated by Dr. Dorfmüller in the fifty first volume of Rust's Magazine. They are indicated in the commencement of the stage of exudation, the sxistence of which is rendered evident by the difficult respiration. He regards the employment of leeches in this stage as of no avail, and the administration of sulphate of copper and emetics as likely to increase the exudation. His recommendation is that the arms of the patient be placed in a vessel sufficiently deep to admit them to a hand's breadth above the elbow-joint and filled with water as hot as it can be borne. A cloth should

now be thrown over the head of the patient, which, falling down around the edges of the bath retains the vapour, and this the patient should be allowed to respire for a quarter of an hour together, repeating it at short intervals. The first application usually induces some degree of moisture in the Schneiderian membrane, and diminishes the dyspnœa. As it is repeated the cough usually loses its hoarse tone and the patient expectorates the exuded lymph. In cases where the symptoms are extremely urgent, calomel in large doses should be given and a blister applied to the throat, but in the great majority of cases the employment of the arm-bath is all that is necessary.

British and Foreign Medical Review, July 1841, *p.* 246.

39.—ON THE IODIDE OF IRON.

By M. Donovan, Esq., Dublin.

Considering the statements, which have been made in other countries of the excellent medical effects of proto-iodide of iron, it is singular that it is not more extensively used in the British isles, and that its exhibition is not more frequently attended with success. I believe the cause of failure is a bad method of preparation, conservation, and exhibition.

It was introduced in the cure of phthisis, by Dupasquier, physician to the Hôtel-Dieu, who found it "a remedy infinitely more useful than all those put together which have been employed to the present hour in that disease." Sometimes, he admits, it has no action, or only an ephemeral one; and how could it be otherwise in cases where the tissues are completely destroyed by disorganization. At other times it considerably ameliorates all the symptoms, gives hope to the patient, and enables him to arrive at the final catastrophe with less suffering. Very often it produces temporary cures; but "sometimes it heals and cicatrizes perfectly and permanently those cavities so easily discovered by auscultation, amongst persons arrived at the last degree of marasmus, and who afterwards resume their original *enbonpoint*, and all the characters of health."

Unfortunately the proto-iodide of iron, possessed as it is of such excellent qualities, is one of the most easily alterable medicines we possess, and it is scarcely ever found in commerce

in a condition to support the character which it has acquired in other countries.

"The proto-iodide of iron generally used," says Dr. Dupasquier, "is a medicine totally different both in its chemical nature and its therapeutic action, from the pro-iodide which I use: the former is not a proto-iodide, although so named in all the formulæ, but a mixture: the composition varies according to the greater or less precautions employed in its preparation and conservation. When dissolved in water, the liquid, instead of being colourless, or scarcely coloured green, is brown, more or less deep, according as the iodide has been more or less exposed to the air. The smell and taste indicate the presence of a notable quantity of free iodine. A properly prepared solution should have no smell, nor more taste than the other salts of iron. It should have no apparent action on amidine, and with yellow cyanide of potassium it should afford a white precipitate; but with both of these re-agents the solution of common proto-iodide of iron affords a blue powder; in the latter case a very deep blue."

"In fine, the common iodide of iron of apothecaries' shops," says Dupasquier, "named in the pharmacopœias and formularies proto-iodide, is a mixture in very variable proportions, of free iodine, periodide of iron, mixed with some proto-iodide not yet entirely decomposed, and sesquioxide of iron."

A solution of proto-iodide of iron, kept even for a few days, lets fall this sesquioxide, or, as Dumas believes, an insoluble compound of iodide and peroxide of iron.

The preceding observations suffice to show that the iodide of iron generally employed is a mixture variable in composition, and therefore variable in therapeutic efficacy. Hence it differs essentially from the true proto-iodide of iron, the administration of which in pulmonary consumption is followed by such advantageous results. "Clinical observation has convinced me," says Dupasquier, "that the least alteration in the colourless solution of the proto-iodide is sufficient to diminish its medical properties, and to communicate to it an irritating action, which totally changes the effects of it."

If this be so, should it create surprise that this remedy so often fails, when we recollect the circumstances under which, in this country, it is always exhibited. In the original preparation it is half spoiled, for it should never be boiled down to a

solid substance, but should be preserved as a colourless liquid. As soon as it has assumed even a green colour, injury is done; but when it is brown it is unfit for use.

The prescriber completes the destruction of the compound when he directs it to be dissolved in a liquid, or made into pills. The apothecary intends everything that is good when he introduces a coil of iron wire into the liquid, or incloses the pills in a bottle; it is all in vain; oxygen will be absorbed, and and the proto-iodide will be spoiled or greatly injured.

Dr. Dupasquier, to remedy these defects, has contrived several formulæ for the exhibition of this substance, founded on the property which saccharine and gummy matters possess of arresting the progress of oxidation in the salts and oxide of iron. He gives the following process for preparing the original solution of the iodide, and from this he forms a syrup, a gaseous water, a marmalade, a pill, a tablette, a jelly, and a lavement, in all of which are methods adopted for preserving the iodide unaltered. The syrup and pills are those which appear more congenial to the habits of physicians of this country; and I shall accordingly extract the formulæ of both. The following is the normal solution of Dupasquier:—

Take of Iodine	15.12	grains.
Iron filings	30.23	
Distilled water	120.89	

Introduce the whole into a small matrass, which hold plunged during eight or ten minutes in water heated to about 170° F., so that no portion of the iodine shall be volatilised. Agitate the mixture frequently. At first the liquid becomes brown, but soon becomes perfectly colourless, or at most retains a nearly imperceptible green hue. This preparation ought to be extemporaneous, for it would be a vain attempt to preserve it unaltered for one hour, even in ground-stopple-bottles, and although metallic iron were present, owing to the decomposition of the water. From this Dr. Dupasquier prepares the syrupus proto-iodidi ferri.

Take of the foregoing solution 60½ Troy grains.

Syrup of gum arabic, colourless and thick, 6.3 Troy ounces weight.

Syrup of orange-flowers, 1.575 Troy ounce weight.

Mix perfectly by agitation during a few moments. It is indispensable that the syrups be colourless, so that the physi-

cian may have occular proof that the medicine is not altered or injured. They should have more than usual consistence, in order that the addition of the normal solution shall not impart such fluidity as would facilitate the alteration of the ferruginous salt by contact of air.

In this formula the proto-iodide is preserved in a state of perfection for at least a month—a matter of consequence to patients residing in the country.

The total quantity of the above syrup is eight ounces by weight, the total quantity of proto-iodide being eight grains, or a grain to every ounce *weight* of syrup—that is, every tablespoonful of the syrup will contain two-thirds of a grain of proto-iodide of iron. Considering the greater activity of the iodide prepared as directed by Dr. Dupasquier, the quantity contained in a tablespoonful of the syrup, may be quite a sufficient dose, but it may be made to any strength.

The following is the formula for the pilulæ proto-iodidi ferri:

Take of iodine	.....	121 grains.
Iron	.....	242
Distilled water	.....	378

Proceed with these to form a normal solution as before; filter, and pour the solution into an untinned iron vessel; add Narbonne honey, 302 grains; evaporate rapidly, until a great part of the original water be dissipated, and a syrupy consistence shall be attained; then add at intervals, continually agitating with an iron spatula, powder of gum tragacanth 184 grains. Form a mass, and divide it into 200 pills. Each pill will contain almost exactly three-quarters of a grain of proto-iodide of iron. These pills remain a long time unaltered. Dr. Dupasquier says that they may be used in place of the pills of Vallet or those of Blaud in the cure of chlorosis.

The facts stated in Dupasquier's essay are certainly worthy of attentive consideration. The form of syrup seems best adapted for patients labouring under phthisis for obvious reasons. If this preparation has effected the cures related in various publications by Dr. Dupasquier, or has even afforded so much relief as is reported, it is an invaluable medicine. At all events it deserves a trial in this new form of exhibition, for the old one afforded a preparation, as Dupasquier declares, not only totally different, but of far inferior efficacy.

Dublin Medical Press, Sept. 22, 1841, *p.* 189.

40.—HINTS FOR THE ADMINISTRATION OF IODINE.

By Dr. Mojsisovitz, of Vienna.

Dr. Mojsisovitz, of Vienna, has contributed an elaborate paper to the Medicinische Jahrbucher, on the administration of iodine and its various preparations, in which he has pointed out certain precautions, which are probably not generally known, and the ignorance of which may account for the unsatisfactory results so often derived from their use.

As the feculent matters decompose the preparations of iodine, we find this substance in the state of ioduret of starch, in the stools of those who eat bread, potatoes, rice, gruel, and vegetables, while taking the medicine. It is therefore necessary to interdict the use of every sort of food containing fecula to patients to whom iodine is given. It is probably owing to a decomposition of this kind having taken place, that we are to explain the inert effects of those enormous doses of the medicine which have been exhibited by some physicians, as Dr. Elliotson, Dr. Buchanan, of Glasgow, and Professor Forget, of Strasbourg. It is rather a curious circumstance that these gentlemen should not have detected traces of the ioduret of starch in the feculent matters of their patients, because Dr. M. informs us that he has never failed to discover it in the stools of such as eat farinaceous substances, while they were taking the medicine.

According to the experience of our author, the use of saline baths greatly promotes the action of iodine on the system. He has also reason to believe that the activity of its operation is a good deal influenced by the condition of the weather at the time. When the air is clear and dry, it seemed to have most effect, and more especially when there was a tendency to inflammatory complaints; whereas on the other hand, its action seemed to be almost null during the endemic prevalence of small-pox, puerperal fever, and diarrhœa.

The crises, which iodine has a tendency to provoke, are salivation, and a cutaneous eruption like scarlatina or miliaria; the secretion of the urine is usually the more abundant in proportion as the diet of the patient is kept low and restricted.

Dr. M. prefers the hydriodate of potash, and the proto and deuto-iodurets of mercury, to either pure iodine or to any other of its preparations. He regards the tincture of iodine as one of the very worst formulæ that can be used; it is more likely he

says, to cause a wasting of the testicles or mammæ, hæmoptysis, palpitations of the heart, &c. than any of its salts.

The dose of the hydriodate which he recommends for adults is about fifteen grains dissolved in distilled water, in the course of the day.

If there be any open ulcers, they should be kept wetted with a solution of the hydriodate; but if the local affection be a tumor, then he recommends that it should be well rubbed with an ointment composed of 2 parts of the proto-ioduret of mercury and 24 of lard.

The diseases in which Dr. M. has used iodine, with advantage, are œzena, ulceration of the tongue, palate, &c., various forms of obstinate cutaneous disease and of secondary syphilis, white swelling and other maladies of the joints, periostitis, tumefaction of the lymphatic glands, scrofulous induration of the subcutaneous cellular tissue, and many of the other kinds of strumous disease.

Medico Chirurgical Review, Oct., 1841, *p.* 510.

41.—MODE OF TREATING ITCH, AT BERLIN.

By Dr. Hauck.

The treatment of itch has lately been made the subject of extensive experimental observation in the Berlin hospitals, and it is satisfactory to learn that a slight modification of what is termed the English method, has been found in every respect superior to any other that was adopted, accomplishing as it does all the desirable objects of curing the disease quickly, certainly, and economically.

The remedy employed was the sulphur and soap liniment of the Prussian Military Pharmacopœia, composed of one part of flowers of sulphur, and two parts of soap mixed with sufficient hot water to make them into a soft ointment. The patients after a warm bath of soap and water had been applied, were placed undressed in a chamber, kept constantly at a temperature of 95° Fah., and well rubbed with the ointment over all the parts where the eruption had appeared three times a day, and then made to sweat profusely by putting them into warm beds. This system was continued for three days and nights; on the morning of the fourth each patient had a warm bath, and then if not

cured, was provided with clean bed and body-linen, and put in a ward of ordinary temperature, in which the suspicious parts were still rubbed with the ointment, and a warm bath taken every other day. In general, no internal medicines were given; but the diet allowed was reduced to a fourth portion, and water only given to drink.

In this manner, with but one short interval, 1981 were treated and cured between September, 1839, and February, 1840, making the total number of days of treatment 15,890, which gives on the average eight days and a small fraction for the cure of each patient, and for the expense of each about two dollars. The exact result was, that—In three days there were cured 42, in four days 161, in five days 333, in six days 376, in seven days 207, and in more than seven days 859.

The treatment of these last was prolonged by many circumstances which can hardly cast discredit on the remedies. In many among them the itch was soon cured, but they remained under treatment for the ulcers which had come on from long neglect of it, or were kept in the hospital till there was no chance of the ulcers communicating the disease. Others among them after being cured of the skin disease had to be treated for other affections, such as ophthalmia, fever, &c.; and others again had their cure delayed by an obstinate refusal to adopt all accessory treatment. And in addition to these causes giving rise to an apparent increase of the length of time necessary for the cure of the disease, there were some others dependant on the management of the hospitals, and other circumstances quite foreign to the treatment adopted, but which, had they not existed, would have permitted the average number of days of treatment to have been stated much lower.

In the whole 15 months there occurred only 8 cases of relapse, less that is than half per cent. of the cases treated; and among these there was, in many, good reason to suspect a fresh infection. The other cases in which there appeared to be a relapse were in fact only examples of eczema resulting from the stimulus of the skin by the sulphur. In no case did the treatment give rise to any general disorder, or to the inflammations and congestions which some have described as resulting from it.

British and Foreign Medical Review, July 1841, *p.* 254.

42.—LEAVES OF THE WALNUT IN SCROFULA.

By M. Negrier, Professor at the School of Angers.

M. Negrier has recently published an interesting memoir on the use of walnut leaves in scrofula, which he regards after numerous experiments, as one of the best antiscrofulous remedies that we possess.

M. Negrier, as well as several other medical men at Angers, had been long in the habit of employing a decoction of walnut leaves as a lotion for scrofulous sores, &c., when he was appointed in 1834, physician to the asylum for children abandoned by their parents; many of these unfortunate creatures suffered from scrofula. Bitters and the usual antiscrofulous remedies were tried with little benefit. A few of the ulcers closed up in May, but re-opened in November, and amongst twenty children, scarcely two cases of cure could be cited at the age of puberty. The author now resolved on trying the leaves of the walnut-tree extensively: there were at the time seventeen scrofulous children in the establishment; nine were effected with swelling and caries of the bones; seven with scrofulous glands, in a state of ulceration; one had numerous scrofulous glands, but unbroken, about the neck, with very severe strumous ophthalmia. Each patient took daily two or three cups of an infusion of fresh walnut leaves, sweetened with a little honey; also, a pill, morning and evening, containing four grains of the extract, or an equivalent syrup. The sores were all washed with a strong decoction of the leaves, and covered with lint moistened with it. The regimen was not altered. The treatment was commenced in spring. Ten days had scarcely passed over, when the nurses remarked that the children had become more cheerful and noisy, they ate with better appetite, and a gradual improvement of the general health took place.

The greater number of the children had suffered under scrofulous disease for two years, and a few for six, eight, or ten years. After two months' treatment three patients were cured, and ten evidently improved: four obtained no benefit. After six months, there were seven cured, five considerably improved, two stationary, and two dead of hydrocephalus and phthisis. Finally, after a lapse of eighteen months, ten children were completely cured, three nearly cured, and two in their original state.

Every physician who has been in the habit of treating scrofula on a large scale, must admit that these results are extremely favourable. In addition to the evidence thus adduced, M. Negrier gives an abridged account of fifty-six cases of scrofula, where the same remedy was employed with considerable benefit. It required some length of time before the medicine affected the general health. Ten of these patients were affected with scrofulous enlargements of the glands; the tumours seldom began to decrease before the end of fifty days; three patients were completely cured, and four others much relieved. Four cases of scrofulous ophthalmia were treated with the walnut leaves: in addition to the infusion and syrup, the following collyrium was employed:—

Decoction of walnut	8 ounces.
Extract of belladonna	1 scruple.
Laudanum	1 scruple.

The four cases were speedily cured.

Twenty cases of scrofulous ulcers were treated; fourteen were radically cured; four much improved; two died of other diseases during the treatment; the period of treatment commonly extended over two to six months, and in a few severe cases over two years. The most effective topical application was fine lint moistened with the decoction; in some cases the powdered leaves were sprinkled over unhealthy sores, and soon gave rise to vigorous granulations.

Nineteen patients were treated for scrofulous affections of the bones; the results were satisfactory, but, as might be expected, very slowly obtained.

To sum up, of fifty-six patients, thirty-one were cured and had no relapse; eighteen were very remarkably improved, and many of them nearly cured; four remained stationary, and four died.

M. Negrier concludes his memoir with the following directions for the preparations of walnut. The infusion is made with an ounce of the leaves in twelve ounces of boiling water; it may be sweetened with sugar or the syrup presently to be noticed. Two or three cupfuls may be given daily, or even five. The decoction is made with a handful of the leaves, boiled for fifteen minutes in a quart of water. The extract may be made in the usual manner, from the dried leaves. For the syrup, eight grains of the extract are mixed with thirty-two scruples of com-

mon syrup: infants and young children may take two or three tea-spoonfuls in the day; adults three drachms. The pills may be made of the extract, four grains in each; from two to four in the day.—*Journal de Med. from Arch. Gen., June,* 1841.

Provincial Medical and Surgical Journal, July 17, 1841. *p.* 304.

43.—ON THE BEST MODE OF EMPLOYING ELECTRICITY OR GALVANISM IN THE CURE OF NEURALGIA.

By M. C. James.

M. James states that the following mode of applying galvanism or electricity to nerves suffering from neuralgic affections, rarely fails in effecting a cure. He is inclined to attribute the numerous failures which other practitioners have met with in the use of this remedy, to the circumstance, that the electric fluid was never made to pass through the nerve at all, but along the skin merely,—rarely, if ever, being made to penetrate to the affected nerve. A fine needle, of about two inches and a half long, made of some metal which is not easily oxidized, platina or gold being the best, and finely polished, is introduced into the seat of the affected nerve. The needle is recommended to be pushed straight down at once to the affected nerve, and not to be turned round, as is often done in introducing needles into rheumatic parts. All needles composed of metals which are oxidizable are condemned as hurtful, both because they give pain from their loss of polish, and from their causing an indelible stain in the spot where they are introduced,—a circumstance which is especially to be avoided when operating on the face or other exposed parts of the body. The neighbourhood of important blood-vessels, is, if possible, to be avoided; at least they should not be transfixed. It is not, however, indispensable to pierce the nerve; it is stated that it is sufficient if the needle be in contact with it. Two needles are generally requisite,—one at the origin of the affected nerve, the other towards its affected terminating branch. The introduction of the needle rarely gives pain.

The needles being fixed, a current of electric fluid is made to pass along the nerve, the positive pole being put in communication with the needle fixed in the origin of the nerve, and

the negative pole with the needle inserted at the extremity of the branch. The voltaic pile of five or six plates usually furnishes a sufficiently powerful current for the first sitting. The electro-magnetic apparatus of Mr. Clark, of London, is recommended as being that which is both most convenient, and whose intensity can be increased most easily at will. The wires of the electric apparatus are only kept in contact with the needles for a few seconds; in some cases, however, a continued current of the electric fluid is made to pass along the nerve. A kind of pricking pain is experienced under the influence of the electricity, most acute at the negative pole.

Several sittings are required before the neuralgic pain leaves the nerve; after it does leave it, however, the application must not be immediately discontinued, as sometimes it returns. It is, therefore, recommended, before withdrawing the needles, to wait for a few minutes, and direct the person to make the motion which usually brought on the pain; if it returns, one or two additional shocks, passed along the nerve, will make it completely disappear. No after treatment is necessary: and when properly performed, the punctures give no uneasiness, and require no treatment.

M. James relates a number of instructive cases of neuralgic affections of the nerves, which occurred chiefly in the practice of M. Magendie, who is the great advocate for this mode of treating neuralgia, which were relieved by the use of electricity.

Edinburgh Med. and Surg. Journal, July 1841, *p.* 291.

44.—HYDROCYANATE OF IRON, A CURE FOR EPILEPSY.

By M. Janson.

M. Janson states that for a length of time he has been in the habit of administering hydrocyanate of iron in cases of epilepsy, and with great success, but that he was unwilling to announce prematurely his mode of treatment, lest it should ultimately prove unsuccessful. Dividing all cases of epilepsy into organic and nervous, (the former generally hereditary,) he finds that in the latter "Hydrocyanate of iron administered periodically suspends the attacks, prevents their return during the time that it is used, and that the suspension is ordinarily

followed by a complete cure of the disease." He adds that "it is necessary to persevere for a long time, and obstinately, in the use of this remedy, and that the proportion be modified according to particular idiosyncrasies." He mentions several cases of complete success, and one in which several relapses occurred, not less instructive from the effect which the medicine had in again putting a stop to the disease. It is given in doses of half a grain night and morning, gradually increased to ten grains for a dose.

The writer remarks, that "the epochs most favourable for the full success of this anti-epileptic remedy are the return of the moon and the full moon." He concludes, "You see then that the means which I propose has been constantly efficacious, even in some cases which we might regard as hereditary."

Journal de Connoissance Medico-Chirurgicales.

45.—ON PARALYSIS OF THE SEVENTH PAIR OF NERVES.

By M. Constantin James.

A case of remarkable interest, and having a considerable bearing on the physiology of the seventh pair, has been brought forward by M. Constantin James. The patient, a young female, presented herself to M. Magendie, having a complete paralysis of all the facial muscles supplied by the seventh pair, on the left side, with great exaltation of sensibility in the auditory nerve. The whole face was drawn towards the right side. Sensibility continued perfect in the face, tongue, &c. Galvanism was prescribed, one needle being placed over the parotid gland, the second successively over the supra-orbital, infra-orbital, and mental foramina. After a short period the features became less drawn to the right, and the paralysis of the left side appeared at first sight to be diminishing, but on examination it was found that this was not the case, but that it was owing to the disease extending to the right side, both now being equally immoveable by the patient. After the galvanism had been continued some time, the muscles of the left side again underwent slight motions, and the features were drawn to the left side, (the reverse was the case when first seen by M. Magendie,) and lastly, the nerve of the right side obtained its power, and the face assumed its normal appearance.

Gazette Medicale.

46.—ON THE SULPHATE OF QUININE IN THE TYPHUS OF CHILDREN.

This disease, at all times grave, in Paris has latterly affected with particular intensity and frequency young children. The writer of this paper, therefore, though he has not advanced many cases to show the efficacy of quinine, yet from its known tonic and antiseptic properties, our prepossessions are in its favour. The patients to whom it was given, six in number, were all between six and fourteen years of age. This medicine, in three of the cases, was the only one given; in the others additional antifebrifuges were used. The result was that three out of the six died. In all the effect of the quinine was to reduce the number of the pulse very considerably after the first dose, but at the same time it became very irregular. The face also and general surface became pale and much cooler. The medicine was given in doses of ten grains in the twenty-four hours.

Archives de Medecine.

47.—CHLORIDE OF BARIUM IN SCROFULOUS AFFECTIONS.

By M. Payen, of Aix.

M. Payen, of Aix, has just published the result of many cases of different scrofulous diseases, treated with chloride of barium. In some instances he confesses, that he failed from not knowing the true principle on which it should be given. When given with the proper indications, it is "a powerful and even heroic" remedy for scrofula. Unlike most other anti-scrofulous medicines which are tonic or excitant, chloride of barium is a counter-stimulant or anti-irritant: hence the greatest advantage results from its use in scrofulous affections, attended by an irritable or febrile state of the system, whilst it is contra-indicated in lymphatic and indolent constitutions, or when the system has been weakened by deprivations. Though necessary to be used with caution, it may be given in larger doses than are generally mentioned; for instance, beginning with two grains. Care should be taken that it is not given in any vehicle decomposing the salt.

Journal de Connaissance Medico Chirurgicales.

48.—HYDRO-SUDOPATHIC TREATMENT OF DISEASE.

By M. Gibert, Paris.

This method of curing diseases by water alone in all its different modes of application, which has made such a sensation in Germany, is at present tested by M. Gibert in the Hôspital de St. Louis, the great receptacle for skin diseases in Paris. It is used as a drink, in partial and general baths, as a lavement, and as a douche. Perspiration is induced by the natural heat of the body, rolled in blankets, in some cases a cloth moistened in cold water being interposed immediately in contact with the body. The perspiration is kept up for some time, the patient is then plunged in a cold bath, and considerable friction used, till the skin becomes supple, and the transpiration ceases, without, however, the reaction being suppressed. Hence this operation should not last beyond a few minutes. The patients should then be dressed, and made to take exercise. During the period of their being enveloped in the blanket, they should drink freely of cold water. Eight patients have been submitted to this treatment; two ichthyoses, four lepra inveterata, one prurigo, and one lichen agrius. The result was, the prurigo and two ichthyoses entirely cured, all the others remarkably alleviated, except the lichen agrius, in which M. Gibert was obliged to give up the treatment, on account of its producing an affection of the chest. More extended experiments are being carried on, and we are promised the results as soon as possible.

Gazette Medicale.

49.—ARTIFICIAL SEA WATER.

The marked action which sea water exercises over many diseases, especially those of a scrofulous nature, depends not only on the salts of soda, lime, and magnesia, but also to a great extent on the organic principle furnished by the numerous plants and animals which it contains. It is necessary, then, in forming artificial baths, to obtain a quantity of the different fuci, and concentrate their medicinal principles in the water. This may be done either by decocting the marine plants, or (which is much preferred by M. Vardo) exposing them to the slower action of the sun. By this means there is less danger of the organic principle being decomposed.

Gazette Medicale.

50.—ON THE EMPLOYMENT OF COLD AFFUSION IN ACUTE HYDROCEPHALUS.

By Dr. Munchmeyer, of Verden.

Dr. Münchmeyer observes that the medical world is greatly divided in opinion as to the value of this remedy; some persons greatly extolling its efficacy, while others regard it as altogether useless. He considers it to be a most important remedy, and one which will often save life when all other means have been useless. One great reason why cold affusion has met with so few supporters is to be found in the misconception which has prevailed with reference to the proper time for using it. It is certainly not always advisable to resort to it, and it should never be forgotten that its mode of action differs essentially from that of cold when kept constantly applied to the head. In the employment of cold affusion, it is the secondary action of cold, as well as the sudden shock to the system produced by the mode of its application, from which benefit is expected; while in the case of cold lotions to the head it is the primary action of cold which is obtained. Cold affusion then must not be looked upon as a directly antiphlogistic remedy, nor is its employment indicated during the early inflammatory stages of hydrocephalus, but rather when affusion, the consequence of inflammatory action, has taken place, and a tendency to paralysis exists, After the subsidence of the violent symptoms of the disease, and when the patient has sunk into a comatose state, with a pale countenance occasionally suffused with a flush, dilated pupils, strabismus, and slow pulse, this remedy will frequently prove of excellent service.

In order, however, for benefit to be derived from it, it must be employed in an efficient manner. Dr. Munchmeyer directs that the patient should be taken out of bed, stripped of his clothes, and wrapped up in some simple covering (if waterproof the better), which leaves only his head exposed. He should then be placed in a sitting posture in a bath or tub, and the person who administers the affusion should mount on a chair and pour cold water upon his head, in a moderate stream from the height of five or six feet. This may be continued for a minute or two, and repeated twice or thrice. The patient should then be wrapped up in a warm sheet and placed in bed,

where he should remain till it is thought proper again to have recourse to the remedy. At first, it will probably be requisite to repeat the affusion, in the course of an hour and a half or two hours; but as the patient improves the interval may be longer, so that at last it will not be necessary to employ it above two or three times daily.

The immediate effect of cold affusion is, that the patients awake from their comatose condition and begin to cry violently, which they continue to do so long as the water is poured upon them. They afterwards appear exhausted and pale, the skin is cool, the pulse small and very frequent. When placed in bed they usually fall into a dose, the pulse becomes more regular, and the warmth of the skin returns. By degrees, as with the repetition of the remedy the patients improve, they begin to have sound sleep, from which they awake in the possession of all their senses, recognize those by whom they are surrounded, and cease to squint. At the same time too a sweat, frequently of a critical nature, breaks out upon the whole body, and during its continuance the employment of cold affusion is very hazardous. The patient's sleep becomes more refreshing, and the comatose condition recurs at longer intervals; he begins to notice what goes on around him, the head regains its natural temperature, and the febrile symptoms disappear. The employment of affusion must, however, still be continued for some days, since relapses very frequently occur.

The paper is illustrated by five cases. In three the employment of cold affusion was perfectly successful, in one it produced temporary amendment, and the death of the patient was to all appearance owing to the apathy of the parents, who neglected to persevere in the treatment, while in the fifth convulsions and death followed affusion while the patient was perspiring profusely.

British and Foreign Medical Review, Oct. 1841, *p.* 559.

51.—ON THE LIQUOR HYDRIODATIS ARSENICI ET HYDRARGYRI.

By M. Donovan, Esq., Dublin.

[In Article 82 of our second number, we gave an sccount of this new preparation as recommended by Mr. Donovan and used

by many eminent men in Dublin; but as we did not publish the formula for its preparation, we now do so.

The process is as follows:]

"Triturate 6.08 grains of finely levigated metallic arsenic, 15.38 grains of mercury, and 50 grains of iodine, with one drachm measure of alcohol, until the mass has become dry, and, from being deep brown, has become pale red. Pour on eight ounces of distilled water; and after trituration for a few moments, transfer the whole to a flask: add half a drachm of hydriodic acid, prepared by the acidification of two grains of iodine, and boil for a few moments. When the solution is cold, if there be any deficiency of the original eight ounces, make it up exactly to that measure with distilled water; finally, filter. The theory of this process need scarcely be adverted to. By the long-continued trituration of arsenic, mercury, iodine, and alcohol, the metals are converted into iodides, which combine. The mass, by solution in water, is converted into an hydriodate of arsenic and mercury. The quantities of the two metals are so adjusted, that when converted into protoxides by decomposition of a portion of the water in which they are dissolved, there will be eight grains of protoxide of arsenic, and sixteen of protoxide of mercury. The quantity of water is such that each drachm measure of the solution will contain exactly one-eighth of a grain of protoxide of mercury. I conceive that the quantity of mercury ought to be double that of the arsenic, in order to ensure a slow and moderate, yet adequate mercurial action, along with the proper effect of the arsenic. Of this *liquor hydriodatis arsenici et hydrargyri*, each drachm measure consists of—water, one drachm; protoxide of arsenic, one-eighth of a grain; protoxide of mercury, one-fourth of a grain; and iodine (converted into hydriodic acid) four-fifths of a grain. The colour of the solution is yellow, with a pale tinge of green; its taste is slightly styptic. It cannot be properly conjoined with tincture of opium, or with sulphate, muriate, or acetate of morphia; for all these produce immediate and copious precipitates in it. Hence if opiates are to be used during the exhibition of this arsenico-mercurial compound, they must be taken at different periods of the day. Tincture of ginger produces no bad effect.

The following formula is proper:—

Liquoris Hydriodatis Arsenici et Hydrargyri, ʒij.; Aquæ Distillatæ, ℥iiiss.; Syrupi Zingiberis, ℥ss. Misce. Divide in haustus quatuor. Sumatur unus mane nocteque.

Thus, one-sixteenth of a grain of protoxide of mercury would be taken in each dose, along with two-fifths of a grain of iodine, which, being in the state of combined hydriodic acid, will be much diminished in energy of medical effect. This is no doubt the proper dose to begin the exhibition of arsenic with, but it will soon be necessary to increase it. The division into draughts is here necessary; first, to insure accuracy in the dose, so essential in the case of this active medicine; and, next, to prevent injury to the ingredients by the use of a metallic spoon as a measure,—the general way in which, unfortunately, the dose of a medicine is determined." (*Dublin Jour. of Med. Science,* vol. xvi. p. 277. Nov., 1839.) Since the publication of the memoir from which we have now quoted, Mr. Donovan, has published the opinions of various professional friends, regarding the importance and efficacy of this new remedy. After giving their communications at length, he makes the following observations:—"In several of the reported cases, it may be observed that slight ptyalism was induced. This is not to be wondered at, when it is recollected that the mercury is exhibited in solution, and that arsenic itself is capable of acting on the mouth. Of the latter fact an instance has been lately recorded. I hope the profession will favour me with other statements, according as the effects of this medicine become more known. They shall be published from time to time. And as the employment of various processes might lead to dangerous consequences, I entreat medical men to be certain that the formula I have given shall be rigidly followed in its preparation. It would be a pity that the character of the remedy should suffer through any error in its mode of production. The test of its perfection is, that the whole of the iodine, arsenic, and mercury, shall disappear and be dissolved during the process of preparing it. This cannot happen unless the three elements employed had been chemically pure, and unless the trituration had been sufficiently long continued. The colour, in a short time after the liquid is prepared should be golden yellow, and the sp. gr. 1.02. I have known one instance in which this medicine had been attempted to be produced by

substituting common white arsenic of commerce in place of re-sublimed metallic arsenic; it is almost needless to observe, that the former substance does not answer the purpose. If any remains after boiling, part of it will be arsenic, and where so small a quantity is made use of, not a particle can be spared to go to waste."—*Edinb. Jour. of Med. Science.*

Medical Gazette, Aug. 6, 1841, *p.* 765.

52.—TREATMENT OF CHRONIC PLEURISY WITH EFFUSION.

By the Late James Hope, M.D., Assistant Physician to St. George's Hospital.

The following paper must possess a high interest for our readers when we inform them that it was commenced by Dr. Hope during his last illness, and concluded on his death bed. Unable to complete it as he could have wished, he was compelled to dictate it in the shape of notes, which he finished only four days before his decease. To those who knew Dr. Hope well, this zeal for science and his fellow-creatures will occasion no surprise. It was consistent with the character of the man, who died as he lived, an accomplished physician and a good man.

At the present time, there is a prevalent doubt whether the fluid of empyæma is ever absorbed. This fluid, it may be remarked in passing, may be either sero-fibrinous and albuminous, or contain pus in any degree up to its pure condition. This seems to be now a settled question, and I think it ought to be so, as the fluid, in healthy subjects, kills not by its quality, but by suffocating.

I cannot feel surprised at this want of success in the cure of empyæma, when I notice the unsettled, vacillating, inadequate treatment recommended even by those writers who think most favourably of the possibility of a cure.

Dr. Law's treatment comes nearest to that which I have found effectual, but he is too timid in continuing the gentle use of mercury, from fear of its inducing irritative fever and hectic. This supposed irritative fever, however, is, in most cases, nothing more than excitement of anæmia, (a fact of which he

does not seem to be at all aware, as even in the convalescent period, he does not even name iron as a remedy,) and the hectic is a necessary consequence when the fluid is pus, and this is diffused through the whole circulation by the process of absorption. I have steadily continued the gentle external use of mercury through the most violent hectic, coming on twice a-day in tremendous paroxysms; while I have counteracted this by the free use of mineral acids; and by a diet not only of strong broth at luncheon, but of animal food at dinner—the patient's tongue being clean, and his appetite and digestion always good.

Dr. Stokes, whose writings on pleurisy I had not the pleasure of seeing till long after I commenced my own observations, I find to be far the most successful in his treatment of chronic pleurisy and empyæma. In an excellent chapter, containing a considerable portion of original matter—some, perhaps, a little fanciful—he mentions that he cured twenty cases running by the use of a pint daily of cold solution of Lugol's iodine, and from a quarter to half an ounce of the ointment rubbed into the side. He is, likewise very favourable to the use of blisters.

I have myself been instrumental in curing five and thirty cases consecutively, during the space of four years, but principally two years and a half, while I was assistant physician to St. George's Hospital.

As I have not leisure to continue this paper at present, I subjoin the following memoranda of how I shall proceed if time permit.*

The private cases being in great detail, and in general features greatly resembling each other, it would be useless to give the whole in full. Therefore pick out a few which give at length as general types—for instance, Miss Miller, Mr. Morgan, and Sir Clifford Constable's coachman—the remainder insert in an abbreviated form, together with such of the out-patients of St. George's as I can recall to memory, though I have lost the notes of their cases.—Show that I used mercury in all degrees of intensity, so as to ascertain what quantity was the most effectual, but at the same time least injurious.—Show that I always used opium, in full proportion, with the mercury, and that I used the milder and the external forms when the others could not be borne—thus taking *especial* care to protect

* It will be observed that, from this point, the form of private notes is adopted.

the mucous membranes.—Add that I found prompt and free salivation by calomel and opium, and the use of one or two drachms of ointment on each groin and axilla night and morning for forty-eight hours, (in conjunction with the other remedies presently to be specified,) produce the most rapid and satisfactory effects of absorption, in cases where the dyspnœa and faintness seemed to be most urgent and dangerous. It was quite common, and, in fact, occurred in the majority of cases, that the fluid descended one-third, and still oftener one-half, down the chest, within the space of forty-eight to sixty hours, carrying with it the extreme dyspnœa and faintness, to the great relief of the patient.

Say that blisters were used from the first, and that the following became my settled plan of managing them. One blister six inches long, 3½ broad, exclusive of margin, was placed longitudinally over, and a little to the outside of the angles of the ribs, leaving space for another of similar size between the first and the spine. Great care was taken not to remove the cuticle, (one means of which was to cover the surface of the blister with silver paper,) as this forms by far the quickest healing plaster; but after about forty-eight hours, during which the running was absorbed by dry napkins, carefully prevented from adhering, it became necessary to cover the whole with the mildest soap plaster, spread on soft calico, to prevent the cuticle from being accidentally abraded. In this way all irritation promptly subsided, that is, in the course of from two to three days, and the patient was ready for the second blister, which was placed between the first and the spine. It was similarly treated; and at an equal interval, a third was placed in front of the original one; that is, rather forward in the axilla. When pain indicated the possibility of a pleuritic stitch in any part of the side, it is needless to say that the first blister was placed over that.—Say that diuretics are conjoined: viz. Squil; Sp. Æth. Nit.; juniper; iodide of potassium, and, when there is no irritation of the mucous membrane, the various other preparations of potass. Digitalis, by creating faintness, is apt to confuse the symptoms; I do not, therefore, use it till later. Where all these remedies had failed for two or three days, and dyspnœa continued as urgent as ever, I have occasionally used a powerful hydragogue, as half a grain to a grain of elaterium, combined with calomel and capsicum to prevent nausea; or the

Pulv. Jalap. Comp. 3j.; so as to produce ten or twelve copious watery evacuatious per day, stimulants being at hand in case of any sinking tendency. The effect of this has on several occasions been perfectly satisfactory, absorption in the chest having now made rapid progress. I derived this idea from a case already alluded to, in which a patient had an accidental hypercatharsis to the amount of sixty stools in two days, which emptied the chest in the same space of time. The patient is better in bed, both because it favours gentle transpiration and obviates faintness.

Remind that, hitherto, I have been treating a case in which the dyspnœa seemed imminently dangerous, and the most vigorous use of remedies consequently indispensable; but now explain that inconvenience sometimes resulted from hypersalivation; for notwithstanding an immediate suspension of the mercury either on the first appearance of tenderness of the gums, or of amelioration of the symptoms—especially the dyspnœa and obvious commencement of absorption, untoward salivation would occasionally occur and greatly retard the convalescence.—Explain that, on several times observing this and having reason to believe that the patient could bear the dyspnœa with safety for some hours longer, provided he were prevented from rising, which creates faintness, (case of Mr. Smith, barrister,) I used more moderate quantities of mercury, being content to affect the gums within three or four days. In this way, the action of the remedy was easily controlled, either by omitting the mercury two or three days, if its action threatened to be considerable, or by merely diminishing it according to the evidence of the mouth and of the symptoms. I found however, that it did not answer to suspend it altogether, but that a continuation of it daily in a mild form, as a blue-pill night and morning, or at night only, for the purpose of maintaining the first impression for a period of two or three weeks, or, in short, until all the disagreeable symptoms had disappeared, was attended with far better success.—Explain, further, that the great acceleration of pulse, which rises commonly to 120 or 130, and in young persons even to 150 or 160, and which is attended with what the patient calls "internal fever," thirst, craving for cold drinks, and dryness and heat of the skin, is not necessarily a result of fever, but it *is* necessarily a result of anæmia, occasioned by the deficiency of oxygenation from the

total incapacity of one lung at least. Here was the error made by Broussais, who supposed this to be fever and put his patient on the lowest diet. On the contrary, acting on the opposite principle, I always supply my patients with at least one or two pints of concentrated beef-tea, or plain ox-tail soup: and if the state of the tongue and the alimentary canal fully authorises it, I permit them tender old mutton or beef for dinner. On this treatment, the pulse and "internal fever" rapidly fall in proportion as the anæmia disappears.

Next proceed to those cases in which hectic is established, resulting for the most part, I should imagine, from the fluids being of a puriform character—for, after a month or six weeks, and sometimes much earlier if the inflammation have been very intense, it assumes this character.—Allude to the opinion pretty prevalent that mercury is injurious in such cases, and say that I have not found it so, but that its use was still indispensable: for I have noticed that where it has been omitted, contrary to my wishes and instructions, a recurrence of the effusion has taken place, notwithstanding the use of mineral acids and the various other remedies usually considered available against hectic; whereas, on resuming mercury with opium, and giving the mineral acids for hectic, I have been enabled to restore matters to their former condition, though not without an extra shake to the patient. One of the best instances of this was presented by Sir Clifford Constable's coachman.—Dwell on this case; say that, after acute pleurisy of three weeks I saw him, and the chest was emptied in a week, but the mercury ordered to be continued. This, on my taking leave, was omitted; and, as he seemed weak, (viz. merely from anæmia, he was ordered ammonia brandy, and other stimulants. In ten days, when I was again called in, his chest had refilled, and he now had a most violent hectic paroxysm at eleven o'clock, A.M., and again at 11, P.M. Each of these thoroughly drenched him, and during the extreme heat the pulse would rise to 150, being also barely perceptible. In this I saw nothing but a large quantity of pus in the circulation, which nature was endeavouring to throw off in her usual manner. I believed, in short, that the fluid in the chest was wholly purulent. I, therefore, continued the mercury and blisters in moderation, and made free use of the mineral acids, which, fortunately, he bore perfectly well. During the brief interval the hectic paroxysms he exhibited

that marked relief which we habitually see, and had always a keen appetite for his meals. He, accordingly, took as much mutton-chop, beef-steak, or roast or boiled mutton, as he was inclined to take. Under this treatment the chest was again emptied within the space of ten days; the hectic symytoms slowly gave way during a period of a month or six weeks, and I dismissed him convalescent to go to the country. I may add, however, that when the hectic was nearly gone, sulphate of iron was added to his sulphuric acid, in order to co-operate with the animal food in removing all remains of anæmia.

Medico Chirurgical Review, July 1841, *p.* 295.

53.—TREATMENT OF ACUTE TROPICAL DYSENTERY.

By Robert Lewins, Esq., M.D., of Leith.

[Dr. Lewins first enters into the nature of tropical dysentry; and then gives the common treatment by blood letting, general and local,—calomel and opium—small opiates—and starch injections. He then directs the reader's attention particularly to Dr. Heyn's treatment, in Java, which he witnessed during a residence there.]

His treatment consisted in administering at the very outset of the disease, a scruple of the chloride of mercury. According to his experience, this powerful pharmaceutical agent, when employed in small doses, acts as an irritant, but when given in large quantities, has so decided and immediate an effect, as to merit the name of a direct sedative. I have seen soldiers brought into hospital in the most severe agony, discharging mucus and blood at very short intervals, and labouring under the most aggravated form of the disease. On administering a scruple dose of calomel, the most marked and gratifying amelioration took place. The tormina, tenesmus, and diarrhœa almost instantaneously cease, a feeling of comfort takes the place of the most intense suffering, the countenance brightens up, the pulse, heat of tongue, and thirst, when present, are diminished, and in short all the distressing symptoms are much alleviated. This remission is, however, often followed by an exacerbation at the end of six or eight hours. Reaction is established, the pulse beginning to rise, and if no steps are taken to prevent it,

the whole train of symptoms return with almost undiminished violence. If the diarrhœa and tenesmus come on, no hesitation need be felt by repeating the scruple dose of calomel, but if the physician be on his guard, he may often prevent this, by active measures whenever the tormina and borborygmus are apparent. This is the critical moment, and a scruple of calomel divided into four doses, administered every three hours, will often prove sufficient to prevent reaction, and overcome the disease. If the malady be obstinate, five grains of calomel should be given boldly every three or four hours, and under this treatment the medical man will seldom be disappointed. When the bowels have been quiet for thirty-six hours, a scruple of the powder of rhubarb was found to be most serviceable. The stools which followed were fetid, dark coloured, fluid, sometimes bloody, but voided with little or no pain. If symptoms of inflammation appeared in any of the abdominal viscera, which rarely happened, leeches were used; but a blister was almost invariably applied to act as a safeguard, and to relieve the remaining irritation in the intestines. The superiority of this treatment over the other is I think unquestionable. The patient is often almost immediately relieved, and is discharged before the acute disease is overcome by other management. Convalescence is very rapid, the debility which strikes the observer as great in the early stage of dysentery being almost entirely fictitious, arising from the patient's instinctive dread of exertion; while on the contrary, if the disease be allowed to proceed unchecked, until even a very slight degree of disorganization has occurred, the process of recovery is most tedious and discouraging. Salivation comes on occasionally under this treatment, but it is by no means necessary for the cure of the disease.

Great care is requisite in the treatment of dysentery, that the patient be confined to an equable temperature; and it may be remarked, that seamen on board ship are very severely affected by small doses of mercury, owing to the exposure to which they are necessarily subjected, from the dampness of the atmosphere, occasioned by the evaporation from the surface of the vast expanse of water by which they are surrounded, and possibly in some degree, from the nature of their aliment. Mercurial pains are in these circumstances a common occurrence after the mildest course of mercury for syphilis, or any other affection, and from their unmanageable character, prove a source

of incalculable annoyance both to the practitioner and his patient.

I have only to add, that I am totally unable to explain the rationale of the treatment recommended. Whether its good effect is to be ascribed to the power which mercury possesses over the biliary secretion, to its contra-stimulant virtues, or to some specific effect in diminishing irritation in the internal surface of the alimentary canal, I do not pretend to determine. I feel myself, however, fully warranted in stating, that experience, the grand criterion of the comparative value of remedies, has proved this treatment to be most efficacious. I am persuaded that if generally adopted, it would in the majority of instances lead to a satisfactory and speedy termination of this most distressing disease.

London and Edin. Monthly Journal of Med. Science, July 1841, *p.* 437.

54.—STRYCHNINE IN CHOREA.

By M. Foulhieux.

M. Foulhieux, of the Hôtel Dieu de Lyon, gives the following very interesting case of chorea, treated with strychnia.

The patient, a boy aged thirteen years, at his entry into the hospital, July 10th, 1838, presented the symptoms of a very intense chorea, which had supervened six weeks previously. A dread of being beat by his school-master was thought by his father to have induced the disease, which came on suddenly, and without any gradation of the phenomena. The limbs were so affected with irregular movements, as to render it almost impossible for the patient to walk, or bear his food to his mouth: his speech was always difficult, and often completely impeded. Sleep procured a complete cessation of all these symptoms.

Up to Jan. 26th, 1839, he was treated with the ordinary remedies—purgatives, valerian, assafœtida, &c. "On this day, Jan. 26th, I had recourse to pills prepared with a twelfth part of a grain of strychnia, one given each night and morning. The two first days the strychnia produced no appreciable effects. the day following there was a gradual exacerbation of all the symptoms of the disease, and the development of a furfuraceous eruption over the whole body. During the night of the 28th

and 29th the patient had violent muscular contractions, which twice precipitated him from his bed, and greatly alarmed his attendants. In the morning, these contractions still continued, but became less strong. The strychnia was then intermitted, and a simple sedative potion administered.

The 30th Jan. not only the yesterday's convulsions had ceased, but the movements of the chorea were singularly diminished. They gradually lessened till Feb. 4th, when they no longer existed. The patient was kept in the hospital till March 5th for a rheumatic affection of the wrist, which came on without any apparent cause."

[It is very evident from the short period which elapsed before the cure of the disease, (which was of some standing,) after the administration of the strychnia, that it must have had a considerable effect; but it is worthy of consideration, how far the eruption assisted in the cure, and if this was in any way induced by the remedy. The treatment of chorea by strychnia would be plainly contra-indicated if it co-existed with any chlorotic or inflammatory affection, and would be less likely to prove efficacious, if the disease were of any standing.]

Gazette Medicale.

55—ON ERGOT OF RYE.

By M. Bonjean.

M. Bonjean read before the Congrès Scientifique de France a very interesting paper on the ergot of rye. He has established, by numerous experiments, "1st. That ergot, gathered the first day of its formation, has not the *toxic* qualities which it possesses when collected after the sixth day. 2. That a heat of 100° (cent. we suppose, though not so stated,) destroys its toxic properties. 3rd. Fermentation has the same effect. 4th. That long-keeping does not affect its strength. That it contains two principles: one oleaginous, poisonous, possessing the toxic properties in a high degree; it is soluble either in cold ether or boiling alchol, but as its power is destroyed by heat, it should be extracted by the former. Twelve parts equal thirty-two of the ergot. 2nd. An aqueous extract. This is not toxic, but possesses high hæmastatic properties, and is a valuable remedy in many kinds of fluxes. Best prepared from the powder previously deprived of its toxic oil.

Gazette Medicale.

56.—PREPARATION OF THE HYDRIODATE OF POTASH OINTMENT.

By Messrs. T. and H. Smith, Chemists, Edinburgh.

The hydriodate of potash ointment has not hitherto been prepared, so far as we know, by any other mode than that of rubbing down the salt in the mortar into a fine powder, and mixing this with axunge. Experiencing the great difficulty, or rather impossibility of making a nice ointment in this way, however much labour might be bestowed in powdering the hydriodate, we were led to try a method suggested to us by a knowledge of the great solubility of this salt in water. As we find it perfectly successful, we believe that it will not be unacceptable to many of the readers of the Monthly Journal, especially those who have experienced the impossibility of persevering in the use of this valuable discutient, from the severe irritation produced by the friction of the gritty particles on the skin.

Whatever quantity of hydriodate is to be used, let it be dissolved in its own weight of distilled, or some perfumed water, and then mixed thoroughly in the mortar with the proper quantity of lard. The two incorporate perfectly, with a very little beating, and form a fine smooth ointment.

The hydriodate of potash ointment thus formed, besides being free from the objection to its use already noticed, will, it is presumed, be much more readily taken into the system, and thereby prove more effectual.

Lon. and Edin. Mon. Jour. of Med. Science, Oct. 1841, *p.* 726.

57.—HOW TO MAKE COPAIBA INTO PILLS.

Take—Balsam of Copaiba, 5 parts; Bicarbonate of Magnesia, 3 parts. Rub them together, and a mass is made exactly adapted for pills.

This affords a very convenient means of administering this drug: the pills agree with the stomach better than the gelatinous capsules, or any other form that I am acquainted with (and they are not more than one-eight to one-tenth of their price,) probably from the minute subdivision of the balsam, the efficacy of which is not at all impaired. Dr. A. T. Thomson has published a method of making copaiba into pills with calcined magnesia, which is tedious, and not so effectual as the above.

Medical Gazette, Aug. 27, 1841, *p.* 878.

SURGERY.

58.—ON CERTAIN STRUCTURES IN THE ORBIT, AND AN IMPROVED METHOD OF TREATING ITS DISEASES.

By J. M. Ferrall, Esq., M.R.I.A.,

Member of the Royal College of Surgeons in Ireland, and First Medical Adviser in ordinary to St. Vincent's Hospital.

[One of the most interesting papers which have lately appeared in the British Journals, is this by Mr. Ferrall. It places in a new light some most interesting appendages of the eye, and enables us to treat some of its diseases with more confidence than we have hitherto been able to do. In the year 1835, Mr. Ferrall was called to see a patient labouring under a most painful affection of the eye. He had been without sleep for more than forty-eight hours. The pain was in the ball of the eye, forehead, and temple, and of a most racking and intense kind. The eye evidently projected three quarters of an inch beyond its fellow; the lids were swollen and œdematous, and of a dusky red colour. The conjunctiva of the globe was protruded all round the cornea in the manner of chemosis, but its colour was not red nor vascular; it had a pale amber colour and manifestly was distended by serous infiltration. The cornea and iris were perfectly healthy.

Bleeding and other severe antiphlogistic treatment greatly relieved for a time, but he was not permanently relieved till the system had been affected with calomel.

Now, what was this affection? The eye was perfectly healthy, the disease was evidently in the appendages. There was neither corneitis, sclerotitis, iritis, nor retinitis. At first sight it seemed like periostitis, but one difficulty presented itself to this explanation: when the upper third of the superior eye-lid was

pressed in such a manner that the pressure was directed backwards towards the apex of the orbit, the sufferings were greatly increased; but when it was directed upwards towards the periosteal covering of the roof of the orbit, the patient did not complain. Besides, periostitis would hardly produce this projection of the eye. On account of the difficulty of coming to a just conclusion on the nature of this case, Mr. Ferrall resolved to examine the anatomy of the eye-ball more minutely. He found that a distinct sheath existed around the globe, which protected it from the unnecessary action of the muscles, and also assisted the muscles in their offices; and it was evidently this sheath, which he names the *Tunica Vaginalis Oculi*, which was affected in the foregoing case. He says:]

Having separated the divided conjunctiva, we expose, not as has been described by anatomists, a cushion of adipose tissue, but a distinct tunic of a yellowish white colour, and fibrous consistence, continuous in front with the posterior margin of the tarsal cartilage, and extending backwards to the bottom or apex of the orbit, where its consistence becomes less strongly marked. By proceeding in the manner I have mentioned, the parts are displayed without any elaborate dissection. The sharp end of a probe, or director, will be sufficient to separate the ball of the eye from the new organ, by breaking gently the fine cellular tissue which connects them. Its colour is totally different from that belonging to its external surface, and it is here perfectly smooth, where the eye glides over it in its movements. The muscular substance of the recti muscles is nowhere visible, they lay on the outside of this tunic, which insulates and protects the eye in the most perfect manner.

The most beautiful portion of this mechanism, however, remains to be described. In the concavity of this tunic, and about half an inch posterior to its anterior or orbitar margin are to be found six well-defined openings through which the tendons of the muscles emerge in passing to their insertion in the sclerotic coat and over which they play, as over pulleys, in their course. The tendons are loosely connected to the edges of those apertures by fine cellular tissue, which opposes no obstacle to their gliding movements.

The physiology of this tunic, which I have ventured to term the *tunica vaginalis oculi*, will be conveniently considered in

relation to each of its saperate offices, namely, as an investment and protector of the globe of the eye, and as regulating the direction in which the muscles of the eye are to exert their force. In either of these capacities, this new and beautiful apparatus (independent of its pathological importance) appears to possess a physiological interest, entitling it to a high place among the many evidences of design, with which the animal frame abounds.

The uses of this tunic, as a covering, will be obvious from a brief consideration of the inconveniences to which, without this protection, the eye would be subjected during the action of its muscles. These muscles, it has been invariably taught, were in close contact with the globe of the eye, on their passage to their insertion, the interspaces being occupied by the fat of the orbit. This description of the parts, which is to be found in the works of the best authors, implies, that during the frequent action of its muscles, the eye must sustain a pressure as great and as suddenly applied, as the movements of the organ are rapid and energetic.

Now, according to the received anatomy of the orbit, the globe of the eye is grasped by the recti muscles in such a manner, that they must, during their action, exert upon it a sudden pressure analogous to that described by Sir Charles Bell. And when we consider, that between their origin and insertion they include the most prominent portion of the eyeball, it is obvious that the sudden swelling of their bellies during their action, (proverbially known to be as quick as thought,) must have produced a flash of light if no protective partition had existed between them. *The use, then, of this tunic as a covering appears to be, to separate the eyeball from its muscles, and to protect it from pressure during their action.*

[Another office of this tunica vaginalis oculi is to assist the muscles by means of the openings through it, acting like so many pulleys, and thereby enabling the recti muscles to act with more power and rapidity in the different motions of the eye; and at the same time it prevents these muscles from retracting the eye—for "certainly if this tunic had no existence, it would be difficult to imagine how the recti muscles could communicate the rotatory movements to the eye without in a greater degree exerting a retracting power." The human

eye has never been seen to be retracted, but *why* has never been explained before. Retraction takes place in many of the lower animals by means of an especial muscle—the retractor muscle; but this is fixed into the globe at its *posterior part*, near the entrance of the optic nerve, and cannot therefore exercise any injurious pressure on the globe. This tunica vaginalis oculi having been discovered, we are better able to understand some hitherto inexplicable diseases. The following case illustrates what Mr. Ferrall calls "Rheumatic inflammation of the tunica vaginalis oculi," with protrusion of the eye:]

Laurence Grant, æt. 32, a carpenter, of dark complexion, and rather strong constitution, presented himself at St. Vincent's Hospital, in February, 1838, on account of violent inflammation and protrusion of the right eye. The globe of the eye projected considerably beyond its natural situation; the cornea and iris were healthy in appearance, but vision was much confused. The conjunctiva projected remarkably around the cornea, but its colour was pale amber, and without any trace of vascularity. The eyelids were both swollen and red; the lower part of the upper lid was so much tumefied, that the ciliæ appeared to grow at an unusual distance from each other; and its transverse diameter was cousiderably increased. The colour of the lid was of a dusky-red, and its surface was marked by a number of distended veins. Although the swelling of the palpebra had increased its vertical diameter, and caused it to descend, the protrusion of the eyeball was so great as to cause it to be uncovered. From the superciliary ridge to the inflamed portion of the eyelid, an interval could be seen, where neither redness nor swelling existed. This space was about half an inch broad, and extended the whole length of the lid transversely.

He complained of agonizing pain in the ball of the eye, and felt as if it were "dragged out of the socket." This latter sensation he described as never ceasing, but the pain was liable to severe exacerbations. He seemed to derive some comfort from keeping the palm of his hand pressed moderately against the whole tumour, although he could not bear the finger of another to be laid upon it. The upper portion of the superior palpebra, which was free from redness, could however bear pressure, provided it was not made suddenly, or so as to shake the whole lid, and that the pressure was directed upwards towards the roof

of the orbit. When asked, he admitted that he perceived an occasional flash of light before his eye; but this appearance was more frequent in the beginning of the attack. It was now five days since the complaint commenced. He went to bed free from pain in the eye, and was disturbed about three o'clock in the morning. He had been unable to work for the last week from rheumatism in his knees and legs; the limbs were improving at the period of the recent attack. He had rubbed the parts affected with turpentine, but had used no internal remedy. There was still remaining slight fulness from effusion into the capsule of the left knee-joint, and tenderness with tumefaction about the middle of the right tibia.

This man had suffered severely from syphilis six years before, and had used mercury largely. He was now married, but his habits of intemperance, as regarded the use of ardent spirits, were little altered.

The temporal artery was opened, and sixteen ounces of blood removed with relief. The improvement, however, was transient, and the pain returned almost immediately. The hospital being quite full at the time, and his lodging near, and not uncomfortable, he was allowed to take his medicine at home. Calomel and opium, three grains of the former, and half a grain of the latter, were administered every third hour.

There was very little amendment until the constitutional effects of the remedy were established. This happened on the fourth day, when the disease began to give way, The pain first diminished, the eye then receded, and the redness gradually disappeared. The tumid condition of the palpebra, and the distorted appearance of the eyelashes, were the last to yield. When the disease in the orbit was removed, it was found that the tenderness and swelling of the knee and tibia were also gone.

[The following case illustrates rheumatic inflammation of the tunica vaginalis oculi, protrusion of both eyes consecutively, and cure by hydriodate of potass:]

Mary Smyth, æt. 48, was admitted into Joseph's ward, April 16, 1843, on account of rheumatism, with effusion into the capsules of both knee jotnts. She was a fat, unwieldy person, and

was rendered quite helpless by the synovitis, although enjoying tolerable health before the attack. No other joint was affected, and she was free from fever. Some degree of restlessness attended the pain; and the renal secretion was scanty and high coloured. Fomentations were employed after the application of leeches, and colchicum administered internally. At the end of a week, and when the swelling was nearly gone, she complained of acute pain in the right eye. There was no appearance of inflammation during the first twenty-four hours, and it consequently attracted little attention, except that an active cathartic was exhibited. On the second day, the upper eyelid was inflamed and swollen, and the ball of the eye was observed to project a little; the pain was increased, and she was annoyed by occasional flashes of light before the eye. Blood was taken from the temple by cupping, and antimonials with purgatives were prescribed. She passed a wretched night, suffering great agony; and the next day, the phenomena of the disease were fully developed. The eyeball projected three quarters of an inch; the cornea and iris were healthy, and looked brilliantly clear in the midst of a very prominent chemosis. The colour of the latter was a yellow amber, without any vascularity or redness. The lids were swollen but did not cover the eye: the upper lid presented the dusky-red colour and tumid appearance described in the last case. The superior portion of its surface, or that next the superciliary ridge, did not participate in this change, and the two portions were separated by a very abrupt line of demarcation. Pressure on the upper division, when directed upwards towards the roof of the orbit, produced no pain. She could see as distinctly with the affected eye as with the other. The resemblance to the other cases was too striking to be overlooked; and as it was obviously not an affection of the periosteum of the orbit, and yet was connected with rheumatism, there could be little hesitation in making a diagnosis. I was desirous to know whether any other fibrous tissue was engaged, and therefore requested Mr. M'Sweeney, the gentleman who noted the case, to uncover the tibiæ. Here, although she had not noticed it to us, we found distinct swelling and great tenderness over the left tibia, about an inch below its upper end. She then admitted that it gave her considerable pain, but her sufferings in the eye were so much greater, that she disregarded it altogether.

Being at this time satisfied, from researches* already published, of the superior efficacy of the hydriodate of potass in periostitis, I determined to trust to it alone in combating this formidable disease; but as the organ of vision was in danger, I directed that this powerful salt should be administered at shorter intervals than usual. Ten grains were given every third hour.

At visiting hour next day, she had taken seventy grains of the hydriodate. She declared herself better, and suffered much less pain, but we could not perceive much difference in the eye. On the day following, however, every person who saw her was struck with the improvement: the whole tumour was greatly reduced; the ball of the eye had receded considerably; the chemosis was lessened, and the swelling as well as redness of the lids was diminished. On the fifth day from the commencement of the treatment, there was hardly any trace of the complaint, and the medicine was therefore discontinued. The tibia had now also recovered its healthy state, when, just as we congratulated ourselves on the rapid subsidence of so severe an affection, the left eye became the seat of pain, and in thirty-six hours presented all the symptoms of the disease. The same protrusion of the eyeball, the same chemosis and swelling of the palpebræ, and, as in the previous attack, the same integrity of vision and intolerance of light. The hydriodate of potass was resumed in doses of fifteen grains every third hour, with a resolve to persist in its use (if it succeeded) for some days after the disease appeared to be removed.

On the day following, I had the satisfaction to perceive that the symptoms had received a check; and in three days more, to find them altogether nearly removed. The hydriodate was continued in diminished doses, and gradually lengthened intervals, for ten days after every symptom had disappeared.

Protrusion of the eyeball, which, when attempted to be explained by uncomplicated periostitis, requires some stretch of imagination, appears a very simple and inevitable result of inflammation of the tunica vaginalis oculi. There are here no soft parts to receive and divide the pressure, or protect the globe. The tunic is supported by other fibrous layers on its outside, as well as by the muscles of which they constitute the sheaths. Inflammation of this capsule must then be immediately followed

* Medical Gazette, April 10, 1840.

by pressure; and when we recollect its conical form, and that, as happens in the case of inflammation of other fibrous tissues, effusion at once takes place into the cellular membrane connecting it to the ball of the eye, we perceive there is nothing to prevent the dislocation of the latter.

This effusion into the cellular tissue will make itself evident in another way. The conjunctiva at the place where it forms the fold, in being reflected from the eyelid to the eye, closes up the tunica vaginalis in front. At this point it will not only receive the pressure of the effused serum, but will become separated from its connexion with the sclerotic coat, by the extension of the infiltration; hence the amber-coloured chemosis without vascularity of the conjunctiva. Chemosis originating in conjunctivitis always presents, in addition to serious infiltration beneath, one or other of the forms of hyperæmia. The chemosis of which we treat is, in uncomplicated cases, the consequence of effusion from a deeper source. I can easily imagine the extension of inflammation from the fibrous structures of the lid, to its conjunctival surface, and thence to the sclerotic conjunctiva; but this complicatiou did not occur in the cases which I have related.

In distinguishing those cases, I would not be supposed to mean, that inflammation of this tunic is a disease apart, and never combined with a similar condition of the periosteum or cellular tissue, on the one hand, or inflammation of the eyeball itself, on the other. I am aware they may exist together, for I have seen such cases. All I mean to assert is that inflammation of the tunic described, may be the primary affection, and the point of departure from which the diseased action may spread to the other fibrous layers in the orbit, and finally reach the periosteum; and that the attack may even be limited to the tunica vaginalis oculi—that it may here produce a train of symptoms of the most dangerous kind, and which have been hitherto supposed to reside in the periosteum, because the existence of other fibrous membranes in the cavity was not suspected.

[Mr. Ferrall shows the value of being acquainted with the anatomical structure he has described, in other cases, such as "adhesion of the tunica vaginalis to the globe of the eye from inflammation", "abscess between the tunic and the globe",

" tumours within the tunica vaginalis oculi"; and lastly in the " extirpation of the globe". Respecting this last operation he makes the following valuable remarks.]

The comparative safety of an operation limited by this fibrous tunic is obvious, but an additional recommendation will be, the facility of its performance. The coujunctiva being freely divided, the six tendons may be snipped across with a scissors one after another, where they emerge from the tunic. The eyeball will then be easily detached by a probe or director passed freely around it; when one step alone would remain—the division of the optic nerve. When we recollect that the roof of the orbit is occasionally found to be as thin as paper in some parts, it will appear most desirable to avoid stripping it of its coverings, by operating within this second orbit, or proper fibrous socket of the eye.

[Mr. Ferrall ends his interesting paper by the following summary.]

The reflections suggested by a review of the cases which led to the present inquiry, as well as of this new and curious mechanism itself, may be reduced to the following propositions:—

1st. That the description of anatomists, which places the globe of the eye in contact with the fat and muscles of the orbit, is erroneous.

2nd. That there exists a fibrous tunic, investing and insulating the eyeball, and separating it from all the other structures in the orbit.

3rd. That the uses of this tunica vaginalis oculi are, to present a smooth surface, facilitating the movements of the eye; and by its density and tension, to protect it from the pressure incidental to the swelling of its muscles during their action.

4th. That the openings in this tunic perform the office of pulleys, giving a proper direction to the force exerted by the muscles,—securing the motions of rotation, and opposing those of retraction, which would otherwise predominate.

5th. That certain cases of disease within the orbit, accompanied by protrusion of the eyeball, are to be explained, only by reference to the tunica vaginalis oculi, and the other fibrous tissues now described.

6th. That a correct knowledge of the anatomy of the orbit and of the fibrous structures alluded to, is essential to the ope-

rating surgeon, in dealing with abscesses and tumours, in extirpation of the eyeball, in the operation for strabismus, and all operations of that cavity.

Dublin Journal of Medical Science, July 1841, *p.* 339—359.

[The following quotation from the memoir of M. Bonnet, Surgeon to the Hôtel Dieu, at Lyons, seems to apply to the same structure as the above; no doubt both Mr. Ferrall and M. Bonnet made their discoveries quite independent of each other.]

The eye is not in contact with the fatty matter of the orbit, as anatomists have stated; it is separated from it by a fibrous capsule in which it moves with facility. This capsule, concave and open within, is inserted on the anterior extremity of the optic nerve, around the two posterior thirds of the eye, without being in contact with them, and terminates on the eye-lids on which it is prolonged; the straight and oblique muscles traverse it to reach the eye, and contract with it intimate adhesions. They have thus two insertions; the one into the sclerotic; the other to the fibrous capsule; and they cannot move one without transmitting to the other all the movements they execute. *This has not hitherto been noticed by anatomists,* and we shall trace their operation on the movements of the eye and eye-lids.

[Mr. John Dalrymple, in his excellent work on the "Anatomy of the Human Eye," published in 1834, anticipated both the above gentlemen in describing the structure. He says:]

In tracing the muscles of the eye from their origins up to their insertions in the globe, we find them invested with dense membranous sheaths, much more strongly marked, however, upon their tendinous expansions, and which, in fact, are here connected with each other to form a cellular investment for the anterior part of the eye as far as the margin of the cornea, and interposed between the sclerotic and conjunctival membranes.

From the cartilaginous pulley of the superior oblique muscle to the point of insertion of that muscle, we find this dense cellular membrane forming a complete canal, lined at its most anterior part with a mucous or muco-synovial membrane, affording a specimen of a true bursa mucosa. . . . . The sheath which invests this tendon and those that are found on the inferior oblique and the ocular aspect of the straight mus-

cles coalesce into one membrane, and *form a cellular capsule loosely adherent to the sclerotic coat as far back as the entry of the optic nerve.* Some mention was made of this investment at page 166; and it will be easily recognised by those who are in the habit of dissecting the human eye for preservation in spirits of wine, since, without a removal of this capsule, the preparation always exhibits a ragged and un-neat appearance.

The use of this cellular capsule is to diminish the friction of the muscles playing over the globe of the eye, and to facilitate the motion of the organ, in a manner somewhat similar to the action of the interarticular cartilages of certain joints.

Lancet, Aug. 28, 1841, *p.* 786.

[Mr. Bennett Lucas refers to the same structure, without however giving any physiological use, in his work on "Strabismus", as may be seen explained by him in a paper read before the Medical Section of the British Association, Aug. 2, 1841. See Prov. Med. and Surg. Journal, Aug. 14, 1841, page 384.]

59.—OBSERVATIONS ON TALIPES.

By James Braid, Esq., Manchester.

[We gave some original observations of this gentleman in our last volume, respecting the dividing of tendons in paralytic states of the muscles. He has published another interesting paper in the Edinburgh Med. and Surg. Journal, on the subject of Talipes in general, and has also referred to the subjects of strabismus, stammering, and spinal contortion. We need not here enter into the origin of the operation, nor into the steps commonly pursued. It is a subject which has already been pretty well discussed.

Mr. Braid brings a case forward to prove that when a tendon has been divided and separated by extension, the two ends are united by the formation of new tendon, or by a substance which strongly resembles it. He affirms that the cause of malpositions constituting talipes is evidently the result of spasmodic paralytic seizures, of which there is ocular demonstration in the non-congenital cases. Having repeatedly tried every mode of treating these cases from the division of a single ten-

don to that of the whole class of tendons which could bear upon the malposition, Mr. Braid proceeds to state]

In a case of pure Talipes equinus, with rigid contraction, it will generally be found that not only is the tendo Achillis and plantaris implicated, but also the flexor longus pollicis pedis, and flexor longus communis, tibialis posticus, and peronœus longus and brevis. I am perfectly aware that after dividing the tendo Achillis alone, forcible extension will be adequate to bring the foot into its natural position; but I am equally certain that it will be after much longer time has been expended, and much more torture has been endured by the patient, than would have been the case, had the tendons of all the muscles named, or had as many of them as were found rigid, been divided at once. Moreover, I confidently affirm that if the whole are divided, and the foot brought to the natural position within four or five days, (if the operation has been properly performed and the patient a healthy subject,) sufficiently firm reunion shall have taken place, to enable the patient to extend the foot by the expiration of that period.

I had operated for a hundred and eight cases of club foot before I thought of dividing the tibialis posticus, and in some cases the flexor longus pollicis pedis, also, in pes equinus; but, observing the effect of dividing the tibialis posticus, and flexor longus pollicis pedis in a case of slight varus, by which the patient was instantly enabled to walk across the floor of my surgery, with his toes out and the soles of his feet flat to the ground, the idea occurred to me, that were they divided as well as the peronœus longus and brevis in cases of pure pes equinus, it would be an improvement. Whoever is familiar with the course of these muscles, from their origins to their insertions, must be at once convinced, as I was; and, if not theoretically satisfied of this, if he will only try both plans in two similar cases, and watch their progress and termination, with an unprejudiced mind, he cannot fail to be a convert to this doctrine. Of course, if any of these muscles are relaxed or paralysed, it would be quite superfluous to divide them; but as they are generally proportionally contracted as the tendo Achillis, it is reasonable to infer, that they should be elongated in the same manner as the others; and by doing this the patient is not only saved much suffering during the time of extension, but is in

less danger of a relapse than where they have been extended by mechanical force alone. This is the more necessary, as the antagonist muscles are generally in a paralysed or a weak state, and therefore they are less able to resist the tendency of the muscles which have been simply extended, from resuming their original state, on the removal of the mechanical extension.

The wounds being closed with adhesive plaster, the foot and leg should be bandaged as high as the knee, to retain the foot in its original malposition, and prevent the contraction of the muscles, the tendons of which have been divided. Absolute rest and spare diet should also be enjoined for a few days. These remarks are applicable to the operation for every variety. Extension should begin in two days, and in three or four the foot may be easily brought to a right angle with the leg. Where this plan is not adopted, the principal seat of pain will be found to be in the course of these undivided tendons, namely, around the external and internal malleolus and the sole of the foot.

For the same reasons, in cases of varus, I divide at once every tendon which can possibly retain the foot in its malposition, namely, Achillis, tibialis anticus, tibialis posticus, flexor longus pollicis pedis, and flexor longus communis, and abductor pollicis, if required, and should there be much contraction of the sole of the foot, the plantar fascia as well as the short flexors. The wounds being closed, and the foot maintained in its original position, in two days extension may be commenced, so as to bring down the heel, and evert and flatten the foot at the same time, with all convenient speed, as far as compatible with the feelings and safety of the patient. The propriety of this will be sufficieutly evident from the facts already stated, of the rapidity of the reunion of tendons so divided. The recommendation of treating such cases by dividing the tibialis anticus, and posticus, and flexor longus pollicis pedis, only, at first, and making such mechanical appliances as are required to bring the foot into the state of a simple equinus, after which to divide the tendo Achillis, and extend, as in this variety, I consider objectionable on three grounds. First, it would retard the cure; second, it would be apt to cause too much new tendon to be inserted between the divided extremities of the tibialis anticus, and thus weaken the power of bending the foot; and third, in order to avoid the pain and inconvenience of treating pure equinus by simply dividing the tendo Achillis, it would be ne-

cessary to divide a second time the tibialis posticus, flexor longus pollicis pedis, and flexor longus communis, as already recommended in the treatment of pure equinus.

In valgus the peronœus longus and brevis generally require division, and sometimes also the tendo Achillis, peronœus tertius, and extensor longus communis, and proprius pollicis pedis. In two days such splints as will produce and maintain necessary extension should be applied.

In calcaneous talipes, the tibialis anticus, extensor proprius pollicis pedis, extensor longus digitorum pedis, and peronœus tertius, generally require to be divided. Divide either the whole or as many as seem to bear on maintaining the malaposition. In two days apply such mechanical contrivance as may be required to place and maintain the foot in its proper position. Having restored the foot to its normal position, it is of great importance to ascertain whether the legs are of equal length. In most cases of single talipes, especially in equinus cases, the affected leg is shorter. This difference should be compensated for by a high-heeled boot, or shoe, as the leg may require, otherwise the patient will not only walk with a limp, but there will be a tendency to recurrence of the original malposition.

Having explained the tendons I recommend to be divided in the different varieties of talipes, and the principles upon which I found these recommendations, I shall now state the form of instrument which I prefer, as well as the situation for dividing the tendons named. Although, in the hands of a dexterous surgeon, any instrument may be adequate to perform the operation, still the size and shape of the knife is not altogether a matter of indifference. For adults I use a straight blade one inch and a quarter long and about one-twelfth of an inch broad. The point cut off at an angle of about 60°. This is less apt to transfix and leave any portion of the tendon undivided than the curved and sharp-pointed blades. It is less liable, moreover, to make a counter opening in the integuments. For infants and children a much smaller blade will suffice.

I divide the tendo Achillis about an inch and a-half from its insertion in the adult, and proportionally less in younger patients, and prefer cutting from without inwardly; the tibialis anticus near its insertion in the os cuneiforme internum; the tibialis posticus near its insertion in the os scaphoides: the flexor longus pollicis pedis, and flexor longus digitorum pedis

at the point of decussation in the sole of the foot, from within outwardly; and from this same wound, the plantar fascia also, when necessary. The peronœus longus and brevis are best divided together above the malleolus externus, but separately below it near their points of insertion; the extensor longus digitorum pedis before the point of separation into distinct tendons; the extensor proprius pollicis pedis, a little more inwardly, and the peronœus tertius in the same line or near its insertion, as preferred in the respective cases;—all these latter from within outwardly, the tendons being kept on the stretch whilst divided.

I now come to the principle of extension, and the apparatus by which it may be accomplished. The Stromeyer boards and Scarpa shoes, which have been generally used, are very good in their way, but have been found very inconvenient for general application, owing to their expense, especially in operating amongst the poor; and it therefore became necessary to contrive some plan which would be both effective and cheap. This, I think, I have attained, by the following simple contrivance. The price of a Stromeyer board is £2. 10s., besides straps and padding, which cost about 10s. more. A Scarpa shoe sells for £2. 10s., their united cost being £5. 10s. for each foot. I consider my apparatns is as effective as both, and will not cost more than one shilling for each foot. It consists of a sole piece of hard wood deal, about three-eighths of an inch thick, the length of the foot and breadth of the sole at its greatest width, with an edge two inches and a half deep, to rest upon the inside of the foot. The two pieces are fastened together with screw nails, and a notch cut in the sole piece a little anterior to the malleolus externus, and in the side piece behind the root of the great toe, to allow the bandage the better to embrace the foot and make it lie close to the wooden sandal. This should be covered with sheet wadding or a pad, and to be bound firmly on the foot with a roller, or two or three straps and buckles. A piece of wood from two to three inches wide, and sufficiently long to reach from the foot to a little below the knee, with a notch at the bottom corner, and with an arm extending forwards to about three quarters the length of the foot, is now to be made fast to the foot and sole piece, by means of a bandage passing from the front of the leg-piece, under and round the sole piece and foot, and then under the

posterior notch from without inwardly and over the dorsum of the foot, passing again round the foot and sole piece, and placed at an acute angle with the sole, so that it may have sufficient leverage to elevate the foot when the upright stem is carried back to the side of the leg. An assistant is now to be requested to place a little wadding or pad at the inner edge of the leg piece, and carry it back until it rest against the top of the tibia, the surgeon regulating the extension to what the patient can bear, by allowing the bandage to give way in the meantime, more or less as he judges necessary. He is now to pass the bandage round the foot, ankle, and leg, from the foot upwards, embracing also this lever, with such a degree of tension as he may judge requisite to secure and maintain the necessary degree of extension the case requires and admits of.

To every one at all acquainted with mechanical contrivance, it will at once appear that this is a combination of the lever and inclined plane; and that it is capable of producing any degree of power which is either safe or necessary for effecting the cure of any case to which it may be applied. According to the manner in which it is fixed, it is equally applicable to the extension required in every variety of talipes. The whole should be undone and re-applied once or twice a-day at first, and the foot bathed with spirit lotion; afterwards it may be repeated less frequently. Such are the practical precepts I have been induced to adopt in the cure of talipes from contraction, and having had an opportunity of treating more cases than any individual in the united kingdom, I have no hesitation in recommending them to others, from the great success I have had since their adoption.

In the course of my investigations and practice, I found there was another variety of talipes, of pretty frequent occurrence, which did not arise from preternatural contraction, but from paralysis, or preternatural relaxation of certain classes of muscles, and for which the Stromeyerian operation was inapplicable. I was therefore desirous of discovering a remedy for it, and a very fortunate idea struck me, which has enabled me not only to treat such cases of talipes successfully, but also other affections of a paralytic nature. The idea was this; as cases of contraction were relieved and cured by division and elongation of tendons, might not the relaxed and paralyzed muscles be cured by the converse mode, namely, by cutting out a portion

of the tendons of such muscles, bringing the divided extremities together, and securing their re-union in that state? It was so strongly impressed upon my mind that this would at least cure the flapping condition of the member, and might, moreover, stimulate the muscles to renewed vitality and contractility, that I resolved to try it on the 30th of June, 1840, assisted by my friends, Mr. Rhind, surgeon, Edinburgh, my son, and my apprentice, Mr. Pacey.

The patient six years of age, had been given up as the subject of hopeless paralysis for two years previous, after the failure of the most approved treatment, under able practitioners. The left leg was perfectly powerless, dangling by the side of her crutch, without reaching the ground, much colder than natural, the foot assuming a slight degree of varus, so that when placed on the ground it rested on its outer edge, the heel slightly elevated, and the toes turned a little inwards. I excised 3-16th of an inch of the peronœus tertius, dressed and bandaged so as to maintain the divided extremities in contact. In a week she could walk across the floor with the assistance of holding by my hand, and on the tenth day, in the presence of my talented friend, Dr. J. L. Bardsley, and others, she actually walked across my surgery floor, and back again, without any assistance whatever,—a circumstance which equally surprised and delighted him and all present. In twenty days she put on a boot, and in another week walked entirely without the crutch, which she has done ever since. Besides the operation, nothing else was done excepting the use of a stimulating liniment, which she had used before without benefit. The results proved in the highest degree satisfactory.

[Mr. Braid then goes on to state his views and treatment in case of paralysis of the muscles on the anterior part of the leg in which he excised a portion of the tendons. We cannot help here extracting these observations, although cases to the same effect were published in the 47th Article of our last number. He says:]

The general inference to be drawn from these and numerous other cases is this, that in about six days, the extremities of tendons from which a portion had been cut, and which were brought and maintained together in the manner named, are sufficiently firmly united to maintain the member in the desired position, and to restore muscular contractility or increased

strength to such muscles as are weak, or have been paralysed for many years.

This operation, I believe, is entirely new, and I hope, will be found an interesting addition to our curative means. I feel convinced it will answer in all such cases as those to which I have referred, if properly managed. It requires considerable care to execute it with that degree of exactness necessary; because, if too little be excised, it will not excite that degree of tone and contractility requisite for insuring sufficient energy; whereas, if too much be removed, it may produce rigid and permanent contraction of these muscles with enervation of the others, which require an entirely opposite mode of treatment.

It is a curious fact that a rigid and permanent contraction of one or two muscles may be sufficient to exhaust the whole nervous and muscular energy of the leg or arm where it occurs, so that there shall be a loss of heat, feeling, and muscular energy of the whole members, all of which may be restored, with so much rapidity, by simply dividing the tendons of the contracted muscles, that it would be no difficult matter to make superstitious people believe that a miracle was performed. Every one who has treated cases of club-foot must have observed the increase of temperature which follows the operation; but, in cases of contraction of the hand, and fingers, and arm, from any contraction of the biceps, long flexors of the wrist and fingers, &c. the division of their tendons have, in many instances, been followed by the most surprising results. Not only have the hands and fingers been set at liberty, but such increased energy restored to the whole arm, that patients of upwards of thirty years of age, who had been deprived of the power of lifting their arms for five or six, or more years, have, in the course of two or three minutes, been able to lift them to their heads. In one case, a patient upwards of 70 years of age, who had paralysis of the right side, and had been dumb for three years, in eight or ten minutes after the operation was able to lift the arm pretty freely, and the following morning spoke for the first time since his paralytic seizure.

To maintain this advantage, it is necessary, so soon as the cutaneous wounds have closed, to make extension, so as to insure a new portion of tendon growing into the point of separation, otherwise, on the re-union, contraction might be re-established, and with it the original feeble state of the member.

The only physiological reason I can offer, as to the cause of the restoration of power and feeling after these operations, is this. I infer that a certain portion of nervous energy is sent to any member for the general supply of the whole of its functions, and that the quantity necessary to maintain these muscles in this state of morbid tension, produces enervation of all the others, with loss of tone, and languid circulation. The operation, by cutting off this profuse expenditure in one channel, allows it to flow for the general benefit of the whole, and hence the muscular power is restored, with freer circulation of blood, which will, of course, produce an increase of heat in the whole member. The operation is also frequently followed with increased vigour of the whole body. This was remarkably evinced in a boy on whom I operated for talipes, from contraction. He was ten years of age, paralytic of the leg, so that he had never had the power either of standing or walking on it, and so weak in his body generally, that he was a most pitiable object, leaning feebly over his crutches, unable to support his head erect. In three weeks after the operation, he was able to walk across the floor by the help of the hands. In a short time longer, he could walk with his crutches, supporting most of his weight on the leg, and supporting the head with ease; and ere long to throw his crutches aside entirely, and walk with a little stick in his hand. I could easily adduce other instances where weak and withered arms, almost from birth, have thus been restored both to power and increased size; but I fear it might encroach too much on your valuable pages.

Thus, the treatment of these varieties of talipes directed my attention to efficient modes of treating local paralysis, where one class of muscles was in constant rigid contraction; and also to another variety, not with morbid tension of the muscles, but where there was a morbid relaxation of one or more muscles. I found a third variety in which there was a morbid relaxation of the whole member, say a leg or an arm, with wasting of its substance, and it became an interesting inquiry, whether any other method could be devised to meet such cases. It is truly gratifying to be able to say, I have been so successful in this variety by a mode of treatment entirely new. I am actively engaged in investigating this subject, and intend, in due time, to lay it before the profession, when I have made some further observations on the subject. In the meantime, however, I shall give a

few of the results, as witnessed by professional gentlemen of high talents, who have examined the patients in some cases before I saw them, and again, in ten minutes after my application. It has succeeded in cases where the patients have had the benefit of all the most approved appliances which modern science has suggested, including electricity and galvanism; and it is equally successfu in infants and children, as in adults, whether male or female.

I had long entertained the idea that the functions of the nerves depended on a subtle fluid circulating within them; and it now occurred to me that friction over the ganglia, and gentle pressure over the course of the nerves leading to the paralysed parts, from their central to their peripheral extremities, might propel a greater quantity of nervous influence into these parts, and thus restore increased energy to them. Moreover, I thought, from the proximity of the arteries, that the same mechanical means would, independently of the increased nervous energy, send a greater quantity of blood along the arteries, and thus also tend to rouse the dormant muscular action. Having formed this theoretical view, I very soon had an opportunity of trying the experiment, and the results exceeded my most sanguine expectation, as a brief notice of the following cases may show. The great sympathy which exists betwixt the muscles and tendons with which they are connected, induced me to apply the same means along their course, especially over the insertion of the tendons of the weakest muscles. Any hard smooth substance will answer the purpose, such as a strong well made ounce phial.

This is, undoubtedly, a different view of treating such cases from that which avails itself of the aid of mesmerism or animal magnetism; and I believe is entirely new. Whether I am right or wrong in my theory, there is no mistake in the satisfactory results of the practice, as it has been witnessed by many, including professional and scientific gentlemen.

A girl, twelve years of age, had been paralytic for seven years, and for the last five the case had been given up as hopeless. The right arm was quite powerless, and the leg so uncertain in its action, that she walked very badly. In ten minutes after my application she walked much better, could move her fingers, and raise, bend, and extend her arm. In three days, she had a second application. In ten minutes after this, she could walk

almost without lameness, and was so much improved in the arm, that she was able to feed herself with it from that time. By a few more applications she was quite restored, and continues now perfectly well.

Mrs. ——, the mother of a numerous family, had been paralytic of the right arm and hand for thirteen months. In ten minutes after my application she was able to grasp firmly with the hand, and move the arm freely, and when she went home the same day, surprised her family by extending the arm, and shaking hands with each of them. A few more applications made her quite well.

I shall only add one case more, that of a young man whose case engaged the attention of many of the most accomplished members of the profession, both in Scotland and England. He was a labourer in Edinburgh, and was under two of the most eminent professional gentlemen in that city, on the first appearance of his complaint, but without regaining the power of his arm. He afterwards went into Glasgow infirmary for some months, but derived no benefit. He then took to hawking for a subsistence, and got into three of the most respectable provincial hospitals in England, and afterwards into three of the London hospitals, but was dismissed from all of them as incurable, after remaining many months in several. He had been afflicted in this manner for about five years and a half. When he called on me last October, the following was his situation. There was the most complete atrophy of the deltoid, biceps and triceps, and in a considerable degree, of all the other muscles connecting the scapula with the chest on the right side. In short, from the shoulder to the elbow there was nothing visible but the integument covering the bone, and he had not the least power of moving the shoulder or flexing the elbow. The muscles, from the elbow downwards, were well developed, and he could move the finger and wrist freely. In ten or twelve minutes after my application, he was able to flex his elbow, and raise his arm, and swing it about in all directions. I made him exercise it for some time, which he seemed quite delighted to have the power of doing. He called again the same evening, and was examined by many who were present at the time. He called on me, and had a repetition of the same means several times, and in about ten days left quite vigorous in his arm. There was a slight

tendency to the same disease in the other extremities, all of which improved in like manner.

Edinburgh Med. and Surg. Journal, Oct., 1841, *p.* 338—353.

60.—MODIFICATION IN THE OPERATION OF DEPRESSION FOR CATARACT.

By John Morgan, Esq., Surgeon to Guy's Hospital.

[Mr. Morgan makes the following observations on this subject, in the course of his excellent lectures now being published:]

I have more than once performed a modification of the operation for depression, which I believe to be new; it is one applicable only to those cases of cataract which occur in combination with disease of the virteous humor. The first case in which I adopted the plan to which I allude, was that of a lady, a patient of Mr. King, your demonstrator of morbid anatomy, who was the subject not only of cataract, but was also affected by synchysis, a disease which consists, as you know, in a melting down, or softening, of the virteous humor, so that the consistence of this part becomes almost fluid. Now here, of course, extraction was out of the question, for a section of the cornea would have allowed the exit of, perhaps, the whole of the contents of the globe. I tried the operation for depression, but found that in consequence of the very great change which had taken place in the vitreous humor, the lens, after repeated attempts to keep it depressed, instantly rose to its former place. I then attempted the operation for solution, but as the cataract was hard, and apparently insoluble, no benefit was derived from this procedure. Well, gentlemen, as the ordinary means of relief had failed, or were impracticable, and as I could not, by the plan which I proposed to myself, make bad worse, I determined to try a new method of practice. I thought that although while the parts were in situ, the buoyant power of the vitreous humor might, in its more fluid state, defeat the desired object of the operation in the manner I have described, yet, that it might be possible, by tapping the globe through the sclerotic, so as to evacuate a portion of that humor sufficient to sink the lens below the axis of vision, I thought I say that by such a mode of proceed-

ing, a permanent depression of the cataract might possibly be effected, by the newly-formed secretion collecting more readily above it, than immediately below, in consequence of the presence of the lens in the lower part of the humor.

The operation I performed was as follows:—the patient was held as in the operation for depression; I then passed a large-sized needle with cutting sides through the sclerotic, about three lines distant from its junction with the cornea, a little below its transverse diameter, and as soon as the point had passed about an eighth of an inch into the globe, I drew its cutting edges vertically downwards, making in this way an incision, parallel with the corneal line of attachment of the sclerotic, and of about a quarter of an inch in length; a small portion of vitreous humor now escaped, but not sufficient for my purpose; I therefore made gentle pressure upon the globe, until enough had been pressed out to sink the lens below the pupil; I think nearly one-fourth of the humor must have escaped: after the operation, a piece of linen kept constantly moist was applied over the lids—the head and shoulders kept raised, and the patient placed in a darkened apartment; on the following day, the globe had nearly recovered its size and form, the wound was uninflamed, and no more uneasiness or pain was complained of, than what usually follows an operation for depression; the the pupillary aperture was perfectly clear. No subsequent excess of inflammation followed, the wound in the scloretic healed kindly, the lens remained depressed, the globe recovered its natural appearance, and vision was so far restored, that the patient could read moderate-sized print with the aid of glasses. I have since performed this operation twice; in one case with success, the other terminated unsatisfactorily; in both of these cases I used Beer's cataract knife, which answers the purpose better than the needle.

Provincial Med. and Surg. Journal, July 24, 1841, *p.* 320.

61.—ON A METHOD OF RESTORING THE LOWER LIP AFTER VARIOUS OPERATIONS.

By Andrew Buchanan, M.D., Glasgow.

[The reader will better understand this paper by referring to the original in the Medical Gazette, in which several wood engravings are given.]

No part of the body is more subject than the lips to tumours, and ulcerative affections requiring to be removed by the knife. In performing such operations, the conspicuousness of the parts renders it necessary to produce as little deformity as possible. This can only be effected by preserving or restoring, as far as we can, the natural form of the parts. In this way also we best accomplish two other objects—that of not interfering with the action of the lips as organs of articulation, and that of preventing the incessant and involuntary discharge of saliva from the mouth.

When the tumour or ulcer to be cut away is of small size, the practice commonly adopted is, that of making two incisions in the shape of the letter V, and uniting them by the twisted suture. To this operation I can see no valid objection, if, after the diseased parts have been completely removed, the lips of the wound can be brought together without much traction. There is, however, an obvious limit to the practicability of this mode of operating. Whenever there is much of the substance of the lip involved in the disease, considerable traction is required to unite the lips of the wound, and there must be, thereafter, more or less retractive force tending to separate the parts, and tear asunder the newly formed adhesions. In such circumstances the pins or ligatures are apt to excite inflammtion and sloughing, and thus force us to abandon the attempt to produce adhesion. Still farther, even if we have succeeded in producing adhesion, the deformity may be considerable, and the cicatrized parts, from the traction to which they are subjected, and from pressure upon the gums and teeth, are apt to suffer from ulceration.

A mode of operating, which was much employed by Dupuytren, consists in simply removing the diseased parts by a semi-elliptical incision. The deformity produced in this way is much less than might be anticipated, as the action of the muscles in the substance of the lip, and the contraction of the wound, tend gradually to bring the cut surface to the level of the adjacent parts. In all mere affections of the prolabium, and generally, in all cases in which the lateral extent of the diseased parts is much more considerable than their depth, this operation appears to me entitled to preference. When, on the other hand, the disease, whatever be its lateral extent, stretches deeply towards the root of the lip, Duputren's operation will be found

to produce a deformity, which is not obviated by any subsequent elevation of the cut surface; and if it be the lower lip which has been operated upon, a constant discharge of saliva will likewise ensue.

There are, then, certain cases of diseases of the lip to which neither of the preceding methods of operating are applicable. These are, in the first place, cases in which it is necessary to cut away the whole lip, and, secondly, cases in which the disease, though more partial, extends so deeply towards the root of the lip as to preclude the employment of Dupuytren's operation, and to such an extent laterally as to render impracticable the attempt to procure adhesion after the common angular section. In such cases it appears to me to be the best practice to form a lip by substitution from the skin of the neighbouring parts. I propose here to describe an operation by which the substitution may be effected very completely, and without giving much pain, in cases of complete or partial removal of the lower lip; but the principle of the operation may be applied in cases of affection of the upper lip, or of other superficial parts.

The first time I performed this operation was in the year 1835, on a man named Adam M'Gilvray, from Tolcross. He was 56 years of age: he had been affected with cancer of the lip for four years previously, Six months after the commencement of the disease, the scirrhous tumour, of which it then consisted, was removed by the knife. The disease did not recur till about two years and a half after the operation, or twelve months previous to his admission into the hospital, on the 13th of May, 1835. It then consisted of a ragged irregular ulcer, with hard tumified margin, and involved the whole of the left half of the lip, and a considerable portion of the right. On the 20th of May I removed the whole of the lower lip by a semi-elliptical incision; and then proceeded to form a new lip in the following way:

The new lip was formed by means of two flaps taken from the sides of the chin, each bounded by a curvilinear incision and a straight one. The former incisions commenced exactly in the middle of the operation wound in the mesial line of the face. The straight incision again commenced at a point from half an inch to an inch distant from the angle of the mouth, in a line supposed to be drawn from that angle to the middle of

the lower jaw at the same side. They extended, each in a direction parallel to that of the corresponding half of the operation wound, and were continued till each joined the curvilinear incision of the same side at its lower end. The curvilinear incisions were perfect arcs of a circle described with the straight incision as radius. Every point, therefore, of the curvilinear incision was equidistant from the point at which the straight incision commenced. In consequence of this arrangement, after the flaps were dissected from the chin and raised upwards so that the upper portions of them occupied the site of the lower lip, the lower portions fitted exactly to the spaces which had been previously occupied by the upper portions. In this situation they were secured by the twisted suture, adhesive plaster, and a bandage; the upper parts of each flap being united together, while the lower parts were united on each side to the summit of the triangular peak, situated in the middle line of the face between the two curvilinear incisions. By the elevation of the flaps, vacant space was left under each; the deficiency in the region of the lip being, in fact, transferred to the two sides of the chin. In the artificial lip thus formed, there is, as in the natural lip, a protuberance in the middle of the upper margin.

Medical Gazette, October 8, 1841, *p.* 79.

62.—THE COMPARATIVE ADVANTAGES OF CIRCULAR AND FLAP AMPUTATIONS.

By Rutherford Alcock, Esq.

[In a discussion in the Royal Medical and Chirurgical Society, on the results of Amputations performed at the North London Hospital, Mr. Alcock makes the following practical remarks, which he illustrates most fully by cases recorded in his very valuable Lectures published in the Lancet:]

With respect to the occurrence of secondary hæmorrhage, he quite agreed with Mr. Liston that the oblique division of the femoral artery was not a matter of importance. But he was not sure that the oblique division of the smaller arteries had not some influence in bringing on or permitting that accident. He had often thought that in flap amputations, the small ves-

sels retracted only partially, which, in circular amputations, would have retracted completely; or that the vessels in the former case were overlooked, which, in the latter, bleeding distinctly, would have been secured. Nothing, however, had convinced him more of the necessity of having accurate records of series of cases, and of not trusting to general impressions, than the results of amputations. In these questions, more than in any others, general impressions were apt to be erroneous, from the circumstance of the strength of the impression which single events, deemed at the time remarkable or important, make upon the mind. With respect to this very question of secondary hæmorrhage, for instance, he had himself gained a very wrong impression from two cases, which was not corrected till he had accurately ascertained the results of the whole series of those that had fallen under his observation. The two cases were these: In an epidemic from which the troops under his charge suffered at Vittoria, the legs in several cases became gangrenous, and required amputation. In the first two instances he amputated in each patient one leg by the flap, and the other by the circular operation; and in both these cases the flap operation was followed by secondary hæmorrhage; but after the circular none supervened. The circumstance made such an impression on him that he entertained no doubt that flap amputations were more obnoxious to secondary hæmorrhage than circular, till he came to sum up the results of all his cases, or, at least, of all those of which he had a regular and well-kept series. The result of this examination was, that in 115 cases, of which 90 were circular amputations, and 25 flap amputations, the proportion of secondary hæmorrhages was somewhat greater in the former than in the latter. In the second place, with regard to the liability to necrosis of the sawn bone in the two classes of cases, he did not think that any difference could be found between them: and it was the same with regard to the conical form of the stump, an event which he believed could only very rarely occur after either kind of amputation, if dexterously performed by a surgeon practised in the operation. As in the 115 cases alluded to it had occurred only twice, he could not draw any conclusion respecting its frequency in one or the other operation. With reference to the main question of the comparative mortalities of each mode of operation, he has found that his results were by a fraction disadvantageous to the flap ampu-

tations. He was not, therefore, prepared to agree in what was said to be the growing opinion, that this operation would in time completely supersede the other. It was true that the flap amputation was a more rapid mode of operating than the circular, and to this full weight must be allowed; for pain is in itself an absorbent of life, and is always followed by a re-action and a febrile disturbance, that may have an important influence on the recovery of the patient. At the same time he thought that the difference in this respect between the two modes of operation had been overrated. Eighty or ninety seconds were ordinarily sufficient for the performance of the circular operation; and if the flap amputation were done in fifty or sixty, the difference of the time during which the patient was in each exposed to pain, was really not so great that much importance could be attributed to it. It did not appear to him, therefore, that on this ground there could be any just reason for discarding the circular mode of operation. A more important point seemed to him to be involved in the question of the after treatment of the stump. There was nothing of which he was more certain than that the idea of the advantages of union by the first intention, which was so commonly held in this country, was greatly exaggerated, and he would go so far as to say that, in some cases, such a union was not only of no advantage, but was actually mischievous, and dangerous to the life of the patient. For patients, after immediate union of the wound, would, often, as he had himself seen, die of the very diseases which were said to result from the wound remaining open. In a primary amputation, after an accident in a healthy man, it was no doubt most natural to desire that the wound should be healed as quickly as possible; and probably, in these cases, it was best to try to obtain a union by the first intention. But in secondary amputations, and in those performed for diseases of the limbs, when the incisions were made through diseased tissues, there was no use whatever, but, he believed, a disadvantage, in bringing them together. They would almost invariably open again, and place themselves in the position in which they had better have been left from the first. This was especially the case when limbs were amputated for diseases which had been connected with a considerable discharge. In all these it was dangerous to stop the discharge too suddenly, and it had been proposed to make an issue near the end of the stump, to keep up an artificial drain to replace

that which has been cut off. But this method, he thought, would be very inconvenient, and such indeed as could scarcely be put in practice; another, which he had sometimes adopted, and which seemed to fulfil all the intention, consisted in passing a skein of silk through the lower part of the wound, and thus maintaining, for a time, a constant irritation and a discharge of matter which afterwards might be gradually reduced.

Medical Gazette, May 21, 1841, *p.* 302.

63—CAOUTCHOUC THREAD FOR SUTURES.

By Thomas Nunneley, Esq.,

Surgeon to the Leeds General Eye and Ear Infirmary; and Lecturer on Anatomy, &c. in the Leeds School of Medicine.

[The following additional observations on this useful improvement in our ligatures have been made since our last volume was published. There is no doubt that in many cases this elastic ligature will prove a decided advantage. Mr. Nunneley says:]

The thickness of the thread which I should recommend for ordinary sutures is about the one-sixth of an inch in diameter when cold. This, on the application of the warmth of the hand, speedily contracts to *one-sixth* of its previous length, and becomes highly elastic. When cold it retains its shortened and elastic condition for any length of time, but it readily admits of being stretched to somewhat more than its original extent, by winding it tightly round any solid body, and allowing it to remain upon it for some time; if the temperature be below 80° F., it will then continue elongated, but if above this point, on the extending force being removed, it immediately contracts again.

In order to determine with more accuracy the extent of the contraction of the caoutchouc thread, the degree of heat at which this takes place, and in what circumstances the disposition to contraction and consequent elasticity is equally maintained, I performed the following experiments:—A piece of the thread, nine feet long, and of about the one-sixtieth of an inch in diameter, drawn through the mouth, held in the closed

hand, or before the fire, immediately contracted to eighteen inches, or one-sixth of its original length. On being forcibly stretched out it measured eleven feet, but on the extending force being removed, again contracted to eighteen inches. On placing a portion of the same length in water at 80° F. no change in it took place; at a temperature of 85° F. it slowly and irregularly contracted in knots to four feet eight inches, which length it retained when taken out and cold. If the water was 90° F. the thread instantly and uniformly contracted to eighteen inches, and whatever be the increase of the temperature up to 212° F., no farther shortening took place. In a dry heat the effect is the same, only not manifested quite so rapidly, and at first I was inclined to think two or three degrees higher temperature were required, but I am now satisfied that this is not so, and that it is dependent upon the caloric being less readily communicated by the air than by water. When the thread is thicker than the sixtieth of an inch, the contraction does not amount to five-sixths of its entire length, perhaps to the four-fifths or three-fourths, but in other respects the effects are the same. All retain their respective lengths when cold, and all maintain the elastic property when warm. Thus, if a piece be wound tightly round the finger, it continues to impress it with an equal degree of force. Hence before the suture be introduced, I should recommend that thread be immersed in warm water of *not less* than 90° F.; by this, ligatures, which possess an uniform degree of elasticity, are always obtained, and the surgeon can readily estimate how tight he should draw the ligature in tying it. In doing this, he should bear in mind the nature of the injury, the density of the part affected, and its present condition, by which he ought to regulate the degree of tension which he gives to the suture; thus, if he expect much swelling he should only draw it so tight, as in the first instance to merely maintain the parts in apposition; if, on the contrary there already be much swelling, he would draw it rather tighter in anticipation of the subsidence, of the tumefaction. But so elastic is the contracted thread, that I apprehend it is *much more* to be feared that the tension given will be too great than not sufficient, and would suggest attention to this point; because if it be, the great object in the use of these sutures is not obtained, and they will cut their way out as soon as the fibrous unelastic ligatures, as I have recently witnessed; when, how-

ever, this is attended to, the threads will remain for many days without producing any irritation. In a case where a large tumour had been removed, and where four of the caoutchouc threads were introduced, at the expiration of a week there was no ulceration about the sutures, which were only then removed because the wound had united.

In the Lancet of March 13th, 1841,* to which I refer for a statement of the advantages which I think the caoutchouc ligatures possess over those made of any fibrous material, I mentioned that previous to being introduced, the threads should be smeared with a little oil; this I find to be unnecessary, as it passes perfectly well without, and its employment renders the knot more liable to slip than if not used.

As in the contracted state in which the thread is introduced it is considerably thicker than when stretched out, or than the ordinary ligature, it appears somewhat bulky when passed through the needle eye: in consequence however, of its elasticity, it does not form nor require so large an aperture as would *à priori* be supposed. Should this be thought an inconvenience, it may easily be obviated, by using a needle in which a greater proportion of the blunt end is filed away, so as to leave but a small bar at the eye; or by using a needle made with a split instead of an eye, into which the thread is put, in the same manner as is practised with some seton needles. Mr. Simpson has just made me some needles of this latter description, which are very well adapted for the purpose. I would recommend that the thread should not be cut into lengths for each suture, but that one should be introduced, and then the others from the same thread; if this be not done, much of the material will necessarily be wasted, on account of its elasticity. I would also further suggest that the thread should be kept in its concentrated state; for although it maintains its elastic condition, and appears unchanged for some weeks, yet I am inclined to think, after a lapse of several months, its tenacity is not quite equal to that which it possesses just after it has been made to contract; and as the contraction is the work of only a minute, and merely requires the thread to be held in the hand or placed in warm water, there can be no difficulty in always having freshly contracted ligatures.

* See Retrospect of Medicine, No. 3, Art. 42.

Another purpose for which I think the caoutchouc thread appears to be well adapted, is the dressing of wounds where adhesive plaster cannot be retained. There are some persons whose skin is so irritable, that adhesive plaster of any kind always produces inflammation; and there are many contused and lacerated wounds, where it is highly desirable to bring the gaping surfaces in contact, and also to produce some degree of pressure upon the detached or torn parts; while, at the same time, fomentations and poultices, or cold lotions, are necessary. In these cases plaster cannot retain its hold, as by the moisture its adhesive properties are destroyed. I propose, when the injured part admits of it, and in the majority of cases it does, as nine out of every ten of these are accidents to some part of the extremities, to bind it up by encircling it with a portion, longer or shorter as may be required, of the caoutchouc thread. By this any degree of pressure and co-aptation may be obtained, and at the same time neither sutures nor plaster are required, while apertures are left for the free discharge of matter, should it form, and the warm application comes in direct contact with the injured part; or should cold lotions be used, it is easy to interpose between the wound and the threadlike bandage a piece of gold-beaters's skin or lint, and thus completely exclude the air from the raw surface: an advantage which I believe to be of more importance than, perhaps, some surgeons imagine.

Before concluding, I may allude to a very different class of affections, in which it appears probable that this elastic material, applied as a bandage, might be used with advantage; as yet I have not had an opportunity of putting the idea to the test, but think the proposition so reasonable, that I shall do so the first time a suitable opportunity presents itself,—I mean in cases of strangulated hernia, when reduction cannot readily be effected, but particularly those which are large and of long standing, where, also the ring is of considerable size; and the difficulty arises rather from the increase and incarceration of the contents of the sac, than from compression by a narrow ring. In these cases inflammation rarely occurs very high; but when it does, it is apt to be of that diffuse character which is the most to be feared after operations. In the cases of which I speak, well regulated pressure will generally be successful in effecting the reduction, and I know of no means by which it can be more

directly, gradually, and equally applied: yet, at the same time, without violence or forcible kneading of the hernia, than by surrounding the whole tumour with a long string of caoutchouc thread; of course the application should commence from the bottom of the hernia, and pass, uninterruptedly, up to the neck. For this purpose I should recommend a thread of about double the thickness of that proper for sutures; or what would be still better, the material in the form of a narrow tape, which, wound spirally round, would completely encase the rupture. By this a degree of pressure, quite as great as it is prudent to employ, may be obtained; for I am by no means certain that I have not witnessed several cases where the death of the patient ought not much rather to be attributed to the injury inflicted upon the gut and peritoneum by the repeated and forcible squeezings to which it is very often subjected, in the anxious efforts to effect a reduction of the hernia by the taxis, than to any other cause. Now, it seems reasonable to suppose that some portion, frequently gaseous, of the contents of the sac, may be expelled by the long-continued and powerful, because elastic, pressure of the caoutchouc as now recommended, especially as all other means and applications may be enjoined. It may be well to state, that the thread may be procured of Mr. Simpson, 55, Strand, London.

Lancet, July 3, 1841, *p.* 505.

64.—CATOPTRICAL EXPLORATION OF THE LENS.

By Dr. Watson.

This mode of exploring the eye, first invented by Professor Purkinje of Breslaw, has come into general notice only since M. Sanson published his clinical observations on the subject. 'The young practitioner ought never to pronounce absolutely even on the existence of cataract without dilating the pupil by *belladonna*, and examining the eye *catoptrically;* and the most experienced may derive advantage from exposing in this way the whole field of the disease to his view, and testing the state of the crystalline.'

If a lighted candle be held before the pupil of a sound eye, three reflected images of it are seen situated one behind the other. Of these the anterior and posterior are erect, the mid-

dle one inverted. The anterior is the brightest and most distinct, the posterior the least so. The middle one is the smallest.

If the candle be moved, the two erect images follow it; but the inverted image moves in the opposite direction, though not so quickly and extensively as the other two.

The anterior erect image is produced by the cornea; the posterior, by the anterior surface of the lens; and the middle or inverted image is from the posterior surface.

If the whole crystalline body be opaque, no image but the anterior erect one from the cornea is seen. This is of course the case also if the anterior part alone be opaque; but if it is the centre or the posterior part only which is opaque, the two erect images are seen, but the middle or inverted one is not.

To apply this catoptrical method to assist the diagnosis of cataract, when the ordinary mode of examination may not have cleared away all doubt, 'the observer and the patient should be placed in moderate day-light; the patient's back is to be turned towards the window; he should be seated, so that the observer may look rather down into the eye than upwards; and a candle is to be used which burns steadily, and does not blaze much.

Cataract, even at an early stage, obliterates the inverted image, and renders the deep erect one very indistinct. Glaucoma, only when much advanced, obliterates the inverted image, while, in all its stages, it renders the deep erect one more evident than it is in the healthy eye.'

Dr. Mackenzie has found that in glaucoma, at a middle stage, the inverted image is pretty distinct, when formed near the edge of the crystalline; but if the candle be brought in front of the eye, the inverted image is less distinct, and in some cases is altogether extinguished. This extinction of the inverted image is owing to a loss of transparency in the kernel of the lens which, in glaucoma, Dr. M. has found, suffers a peculiar degeneration, characterized by dryness of substance, and a reddish brown colour.

In incipient lenticular cataract the inverted image, though changed neither in colour nor in size, is indistinct, and its outline as if washed off. It is extinguished long before the cataract is fully developed—a fact of the greatest importance, Dr. M. remarks, in the diagnosis betwixt glaucoma and cataract, because in lenticular cataract, it is not the kernel of the lens, but

the superficial laminæ, which are first affected, so that the formation of the inverted image by any part of the posterior surface of the crystalline body is prevented.

'In capsulo-lenticular cataract, the inverted image fades much sooner than in mere lenticular cataract; and even when the capsule, or the superficial substance of the lens, seems to be alone opaque, the inverted image disappears much sooner than we should expect from the apparently moderate degree of opacity.

'In lenticular cataract, there is merely a general reflection, but no distinct image, from the anterior surface of the crystalline body.

'If the lens is not in its place, but has been absorbed in consequence of an injury, been removed by an operation, or fallen down into a dissolved vitreous humour, neither inverted nor deep erect image is formed.

'In the diagnosis of incipient cataract and incipient amaurosis, the catoptrical test is perfectly decisive; for in amaurosis, uncombined with glaucoma, the three images are always distinct, while in even the early stage of cataract, the inverted image is obscure. The diagnosis of incipient cataract and incipient glaucoma requires the catoptrical test to be familiar to the observer, else he may not be able to distinguish, that when the candle is held in the axis of the eye, the inverted image is indistinct in both diseases, but whenever it is moved to one side, it becomes distinct in glaucoma, and remains obscure in cataract."*

Cyclopedia of Practical Surgery; and Medico-Chirurgical Review, July 1841, *p.* 136.

65.—USE OF INJECTIONS IN GONORRHŒA.

By W. Acton, Esq., late Externe at the Female Venereal Hospital, Paris.

[Under the head of "Abortive Treatment" in Mr. Acton's valuable work on Syphilis, he makes the following excellent remarks on the injections which are found most successful in Gonorrhœa:]

At the commencement of a discharge from the urethra, and previous to any redness around the orifice, or pain felt in making

* Mackenzie, p. 640—641.

water, the surgeon will frequently be able, at once, to cut short the affection and cure his patient; under other circumstances, this plan will not avail. It consists, in addition to the general means spoken of under the head of abortive (?) treatment of blennorrhagia, in employing, during the succeeding forty-eight hours, twelve injections of nitrate of silver at regular intervals: the strength of the solution of the salt should be two grains to the ℥ viii. of distilled water. Let the injections be then left off, and cubebs or copaiba be given in the doses above spoken of. If the cases be recent, and the disease not too far advanced, this treament will succeed, fifty times in a hundred cases, in checking the disease; and there is no fear of occasioning stricture or swelled testicle at this period of the complaint. Under this treatment the running will at once cease; but to complete the cure, it will be necessary to continue the cubebs, diminishing gradually the dose. No further recourse should be had to injections, as a continuance in their use would only tend to keep up irritation; at the end of fifteen days the surgeon may allow his patient to resume his usual habits.

The Direct Treatment consists in the employment of injections. Of all those I have seen employed, no doubt exists in my mind that by far the greatest benefit is derived from the nitrate of silver. The strength of the solution should be two grains to eight ounces of distilled water. To employ this properly, the following directions should be attended to: during the forty-eight successive hours, twelve injections should be thus used: let the patient place himself on the edge of a bed or chair, and having previously charged a glass syringe with the solution of nitrate of silver, let him hold it perpendicularly, introducing it perfectly parallel with the urethra; if he now gently push on the injection, the fluid will easily enter the urethra, and come in contact with every portion of the canal: no pressure is required on the perineum, as the force employed is not likely to push the fluid far into the canal. As to its reaching the bladder, and the danger that attends it, I can assure my readers this is chimerical, as any one must be convinced who has ever attempted to inject the bladder; to effect that, a catheter must be employed, and a strong syringe. Even supposing the solution to reach the bladder, the smallest quantity of urine will decompose the nitrate of silver. I have seen, purposely, not only injections, but the solid stick of nitrate of

silver, introduced into the bladder without any ill consequences following.

A glass syringe is recommended; and we should be careful to tell the patient that a pewter instrument decomposes the salt, and renders it less efficacious. Should we inform him that the solution is one of those preparations which act on pewter, he would refuse to employ it on the score that if the solution acted on the metal, it would as a necessary consequence, injure the urethra.

The liquid should be injected cold, and a common sized syringe, only half filled, will be sufficient, as the urethra does not hold more than that quantity.

Soon after the injections have been employed, there will appear a reddish-looking discharge; this should not prevent the patient from continuing the twelve injections at intervals of four hours, notwithstauding any slight pain which may occur; a slightly purulent, rosy discharge is a very favourable sign, as it shows that the disease will rapidly yield.

We have dwelt at some length on the cases for which injections are suited, on the period, the strength, and manner of employing them, because we have the firm conviction that they have not been hitherto correctly appreciated: they have been either too freely praised, or too absolutely rejected, without sufficient trials.

Various other injections have been recommended; and Mr. Carmichael, particularly, some years ago, proposed another method, which differs materially from the one we have just spoken of. He advised that injections of nitrate of silver, containing ten grains to the ounce of water, should be used. He purposely caused an inflammation, to destroy the special catarrhal one, and stated that gonorrhœa might be cured by this means. He further treated the inflammation of the urethra, which he had occasioned by antiphlogistic means, and on the disappearance of the inflammation, he states both complaints were cured.

M. Ricord, in speaking of the merits of this treatment, says that such means will cure a great number of cases; but the surgeon plays a game of double or quits: if the disease be not cured, its violence is increased in a relative proportion, which is not unattended with danger; hence, he has long since desisted from employing injections in the acute cases of gonorrhœa.

With respect to the method of employing injections, we can personally speak of their great advantage, having seen them employed in a great number of cases during the last three years, and *in no one case* have we seen either stricture or swelled testicle follow their employment in the treatment of the affection at its commencement.

Dublin Journal of Medical Science, Sep. 1841, *p.* 136.

66.—USE OF MORPHIA IN STRANGULATED HERNIA.

By David Bell, M.D., Carlisle.

[Dr. Bell brings forward the following interesting case to show the efficacy of morphia in this affection. He was first induced to try this remedy instead of the usual nauseating medicines, from observing the great prostration of strength and total relaxtion of the system, which followed a large dose when given to subdue agonising pain in different parts.]

Being called to Mr. C——, aged 55, of somewhat delicate constitution, I found her labouring under all the symptoms of strangulation of the intestine, and on examination felt a protrusion from the left femoral opening about the size of a pigeon's egg. I was told by the patient that she had been the subject of this affection for several years, and that, on one occasion, two medical gentlemen had used every endeavour by the taxis, &c., for hours, and were on the verge of an operation before they succeeded in its reduction. The tumour, when I first felt it, was pretty tender to the touch, (having been much handled by the patient in her attempts to reduce it,) and after I had used the taxis, with every reasonable change of position that might be favourable, for nearly two hours, the parts became so tender that she screamed aloud at the slightest touch. I resolved, therefore, on a trial of the muriate of morphia, and prescribed one grain in an ounce of distilled water, with the addition of a drop of muriatic acid. The one half was taken immediately, and the remainder in half an hour afterwards. The result was, that symptoms consequent upon a large dose of this medicine (for one grain is such *when genuine*,) shewed themselves in less than an hour,—the patient felt, to use her own expression, as if she had "lost all power." There was a clammy

moisture of the skin, with some drowsiness, and on applying her hand to the swelling, in a half unconscious manner, it gave way under the slightest pressure, and disappeared.

Previously to giving publicity to this case I considered it prudent to avail myself of others, should they occur; and having been called to a lady, aged 60, of rather delicate constitution, on the morning of 2nd January, to relieve her of a "violent vomiting and pain in the bowels," I was led, from the symptoms, to examine the groin, when I found a femoral hernia much of the nature of that just detailed, and endeavoured to convince the patient that this was the entire cause of her sickness and pain, but failed. She insisted upon having something to relieve her sickness; and after I had tried the taxis in vain, I ordered a sinapism to the pit of the stomach, administered the muriate of morphia as above, and with equally satisfactory results.

I would not say that one grain is by any means the highest dose that I should venture upon; on the contrary, I think that a quarter to half a grain more might be administered every half hour, until the symptoms were such as to forbid its further use with safety, or till the desired effect was produced. Nevertheless, as already hinted, very great caution is to be observed after one grain has been given,— always bearing in mind, that the purity of the medicine and the idiosnycracy of the patient, may most materially affect the result.

As the patients forming the subject of this paper were both of rather delicate habit, I would hint, that in very plethoric or robust individuals, there might be a just prudence exercised in previously abstracting a quantity of blood.

Lond. and Edin. Monthly Journal of Med. Science, Sep. 1841, *p.* 653.

[This practice is corroborated by that of Dr. A. W. Davis, of Presteign, who publishes the following case:]

I was at the house of an eminent surgeon in this neighbourhood, when his assistant arrived with intelligence, that all the means used for the reduction of a case of strangulated hernia had failed, and that the operation must not be longer postponed. The assistant, a member of the College of Surgeons, had been with the patient during the preceding night, and had neglected none of the ordinary means constituting the taxis. Finding that opium had not been given, I suggested the employment of a large dose, and a teaspoonful of laudanum was immediately

given. This producing no effect, after waiting two hours, another teaspoonful was given. This was almost immediately followed by prostration of the muscular system, a dilatation of the pupil in a remarkable degree, and the easy reduction of the hernia. The patient was a strong muscular man, a farmer's servant.

I deem this the more worthy the notice of members of our association, because I derived the hint from my excellent friend Dr. John Conolly, in conversation, when I had the pleasure of seeing him at the Anniversary Meeting at Oxford. The benevolent mind of Dr. Conolly will be gratified to learn, that an incidental remark of his saved at least one individual from a painful and dangerous operation.

Provincial Med. and Surg. Journal, Aug. 28, 1841, *p.* 434.

67.—APPARATUS FOR APPLYING WATER IN THE FORM OF IRRIGATION.

By Dr. James Macartney, F. R. S., &c.

[The term irrigation is applied to the practice of water being continually dropped or dribbled on different parts. In France this is done by a bucket holding water, being suspended above the patient, and the water allowed to drop from the cock half turned upon the part. An improvement upon this, is to make a syphon with pieces of worsted, or other material of a porous nature, and having a vessel of water in the neighbourhood of the part to be irrigated: one end of the syphon is placed in the water, and the other on the limb or part to be irrigated; and by this means the water is made to dribble beautifully, according to the wish of the surgeon. Dr. Macartney has contrived the following apparatus:]

The apparatus consists of a box made of zinc, something like a fracture-box, in which either the upper or the lower extremity of the patient may be placed. The water, or a medicated fluid, is carried in a flat tube, which at one end is connected with the reservoir, and the other end projects through a slit in the upper edge of the box. The tube contains a strip of coarse woollen cloth which is broad at one end and pointed at the other. The broad end is received by the vessel that contains the fluid, and the pointed end either rests upon the dress-

ings of the affected part, or is suspended immediately over them. The water is taken up by the strip of cloth, and carried along it on the principle of capillary attraction, or in the manner of a syphon; and thus a continued supply of water is conducted to the part affected, without inconvenience or exposure to the patient. In order to get rid of the fluid, there is a concave bottom, perforated with large holes, through which the fluid passes into the inferior part of the box, and from which it is conveyed by a tube into a vessel that may be placed outside the bed for the purpose of receiving it. The perforated bottom, for the sake of cleanness, is made to take out; and there is a soft cushion, covered with painted linen, on which the limb rests, and consequently the whole is not kept wet.

The quantity of fluid which may pass can be regulated by placing the vessel or reservoir containing the water either higher, or on the same plan as the patient's bed. If placed high, so much as three gallons of fluid may be supplied in the course of twenty-four hours. If warm water be required, as in cases of strains and lacerated wounds, the temperature of the reservoir may be kept up by means of a spirit lamp.

The irrigating machine is made and sold by Messrs. Weiss and Son, instrument makers, 63, Strand, London.

The advantages of such an apparatus as I have described are sufficiently obvious to all persons acquainted with the effects of moisture at different temperatures, according to the nature of the injury, in appeasing the sensations, and in preventing or abating inflammation.

Provincial Med. and Surg. Journal, July 31, 1841, *p.* 342.

68.—RADICAL CURE OF HYDROCELE.

By M. Velpeau, Paris.

For the radical cure of hydrocele, M. Velpeau considers none of the numerous methods that have been used by surgeons so fitting as that of injection of the cavity. He expresses his surprise that the surgeons of London, Berlin, and America should still perform dangerous, long, and bloody operations, instead of the one he is in the habit of using. We think that since the publication of Pott's excellent treatise on this disease few surgeons in this country have deserved this reproach of M.

Velpeau. But he himself recommends incision of the sac, in cases where the contained fluid is thick, or where the coats of the tunica vaginalis are so hard, thick, and solid that injection of the sac will fail to cure the disease; and in cases where the sac has degenerated into a stony or osteo-calcareous shell, or into lardaceous matter, he recommends excision. In the radical cure of hydrocele M. Velpeau has been in the habit of using an injection of tincture of iodine instead of wine or other stimulants, and he considers it to have the following advantages: a small quantity only is required, half an ounce to an ounce; it produces no ill consequences even if allowed to remain in the sac; it does not cause any serious injury if injected into the cellular tissues; and lastly it is almost uniformly successful. The cure is also more prompt, being effected in eight, ten, or twenty days. If there be swelling of the testicle, this also is frequently cured by the injection; and in cases where the swelling appears uninfluenced by the operation, M. Velpeau has found that at the end of five or six months it has entirely disappeared, The proportion of iodine used by the professor is two or three drachms of the tincture to an ounce of water; he has even used the pure tincture without any bad consequences: he considers that the reason why M. Fricke of Hamburg has failed in his operations, is that he has not made use of a sufficiently strong injection. M. Velpeau, reasoning from the relief afforded to the cases of acute hydrocele by puncture of the tunica vaginalis, has employed this means also after injection with the iodine solution, and has found that the tumour has been thereby much more rapidly discussed. One of the most eminent hospital surgeons of London has for some time been in the habit of using the iodine solution in the radical cure of hydrocele, and he has the same opinions of its efficacy as M. Velpeau. It is necessary to prepare the solution of iodine with the hydriodate of potass. In congenital hydrocele M. Velpeau recommends the iodine injection, while at the same time pressure is made on the inguinal canal.

[On the subject of gonorrhœa M. Velpeau offers some judicious observations, many of which, however, have long since been anticipated by Ricord, Acton, and others.]

In the treatment of this disease M. Velpeau has tried the effect of iodine, balsam of storax, and gunpowder, each of which remedies has been recommended by some surgeons, and

he finds these therapeutical agents useless. He discusses the respective merits of copaiba and cubebs. Patients do not suffer so much from the exhibition of the latter as of the former, and the tone of the stomach is sometimes to a certain degree improved by the cubebs; but the combination of these two medicines in the proportion of one part of copaiba to two of cubebs, produces the most beneficial results. This form of medicine has been recommended by Mr. Liston in the last edition of the Elements of Surgery. M. Velpeau believes that the rheumatism, which has been said to be caused by copaiba is more probably induced by the disease for which it is administered. The rash produced by this medicine is of no consequence. Beside these specific remedies, M. Velpeau recommends in acute cases general bloodletting and leeches to the perineum; and where there is much thickening of the urethra, he has found friction with mercurial ointment of great benefit. The application of small blisters from the anus to the scrotum, as recommended by Mr. Poirson, has been occasionally useful in cases of old standing. In the local treatment of this disease M. Velpeau considers the objection to injections absurd; the abuse only and not the use of these remedies is to be condemned. Sulphate of zinc is, in the opinion of the professor, of no use in recent cases of discharge from the urethra. In gonorrhœa of old standing or in gleets, in very small doses its effects are beneficial; one grain to an ounce of water is the proper proportion. Nitrate of mercury has also been recommended, but is far inferior to nitrate of silver, combined with compression of the urethra. The injection should contain one grain of the salt in every ounce of water, and is used at the same time that the cubebs and copaiba are exhibited internally in the early stages of gonorrhæa. The injection should not be continued longer than three days (about three times a day), lest it produce a fresh irritation in the urethra. This canal should be kept constantly compressed by means of small graduated compresses, dipped in starch, applied from the bulb to the fossa navicularis, and retained by means of a bandage. M. Velpeau's plan of the treatment is in all respects one which we should be inclined to recommend, and which we have for some time been in the habit of using, with the exception of the compression of the urethra, of which we have had no experience.

British and Foreign Medical Review, Oct. 1841. p. 453—459

69.—ON THE EMPLOYMENT OF NITRATE OF SILVER IN WHITE SWELLINGS.

By M. Jobert, Surgeon to the Hospital St. Louis.

By a series of accurate and conclusive observations M. Jobert has shown that the best and most prompt means of overcoming articular pains in cases of white swelling, and to make the turgescence of the tissues disappear, consists in the external employment of an ointment of nitrate of silver. We have watched on fifteen patients the action of this remedy, in the wards of M. Jobert, and have been astonished at the prompt effects in long-continued and previously rebellious diseases. The treatment consisted in frictions on the diseased articulation with an ointment composed of thirty parts of lard to four of nitrate of silver. If the action of this be insufficient M. Jobert uses eight or twelve parts of the salt to thirty parts of lard. There ointments, designated by the numbers 1, 2, 3, constitute the whole of the treatment. Twelve or fifteen hours after the first employment of the ointment, and generally after the second friction, an eruption of small accuminated pustules appears, presenting a black point in their centre, and surrounded at their circumference by a small rosy areola. The liquid contained in the vesicle at first resembling thick milk, and rapidly assuming a yellowish-white appearance, afterwards becoming true pus. Each friction is accompanied by pains which last three or four hours. About the second or third day the skin becomes of a violet colour, and smarts acutely. The frictions must then be suspended, and not renewed until the parts are calmed. We do not enter into further details, as a full memoir on the subject is promised.

[It is very extraordinary that such accurate pathologists as the French should so generally continue to class as "*tumeurs blanches*" the very different diseases to which the joints are subject. We are thus left in doubt whether the abave cases were scrofulous enlargement of the articular extremities of the bones, ulceration of cartilage, disease of synovial membrane, or of parts external to the joint.—*Editor of British and Foreign Medical Review.*]

British and Foreign Medical Review, Oct. 1841, *p.* 550.

70.—TREATMENT OF BURNS BY SOAP.

By Thos. Williamson, M.D., Physician to the Leith Dispensary, &c.

[Dr. Williamson's treatment of burns by soap may raise a smile, but is nevertheless found to be successful; and on account of its simplicity, and of its being always at hand in cases of emergency, will no doubt be more generally adopted. He says:]

The mode in which I am in the habit of employing it is this:—A common shaving box may always be procured, from which a good lather may, in the course of a minute or two, be easily obtained. This lather is then gently laid over the burnt surface by means of a shaving brush, and repeated so soon as the first coat begins to dry, or the pain return. This practice ought to be repeated occasionally during the first day, or until such time as the pain is relieved. The benefit accruing to the patient is *immediate*, and the result of the practice highly satisfactory; for in more superficial burns, if early applied, vesication is prevented, and, in the course of a few days, desquamation of the cuticle follows, without leaving a raw surface. Of course, this, as a remedial measure, is most applicable to superficial burns; but even in such cases as involve destruction of the more deep tissues, it is not used without advantage, in so far as the personal comfort of the patient is concerned. In such cases, after the lapse of a few days, the crust formed by the soap is easily removed, so as to permit the employment of other remedies, if necessary. I am not prepared to say whether the benefit and instantaneous relief, following the application of the lather, are to be ascribed to its chemical composition, or simply to the fact of its affording some degree of protection from atmospheric agency, or both.

Medical Gazette, Sept. 17, 1841, *p.* 978.

71.—ON THE EXCISION OF JOINTS.

By Bransby Cooper, Esq., F.R.S., Surgeon to Guy's Hospital.

[Mr. Cooper relates two interesting cases of this kind in his "Reports of Cases requiring Capital Operations," published in

the last number of Guy's Hospital Reports, and concludes by the following practical remarks.]

Operations of this nature are much more successful in joints which have been, as it were, prepared for them by a long course of diseased action, modifying and diminishing their vitality, than in healthy articulations. A joint, of which the structures and functions have been gradually modified by morbid processes, may be exposed, and partially or wholly removed with perfect safety; but such an operation will be attended with much more dangerous symptoms where there has been no previous chronic disease.

The operation of excision of the joint is better suited for the upper than the lower limbs; because the actions of the former are more independent of each other; and the latter, moreover, have to support the whole weight of the body, and require greater strength than is afforded by a new joint. Then, again, the injuries and diseases of the knee-joint are generally much more serious than those at the elbow, and their constitutional effects more alarming. The lower limbs having to act in concert during locomotion, the one supporting the body, whilst the other advances; if any motion remains in the new knee, it becomes less useful than an artificial support. The operation is indicated when it is evident that nature can only effect a cure by anchylosis, and when at the same time it is plain that the constitution is unequal to endure the prolonged and exhausting irritation attendant upon the exfoliation of bone and protracted discharges. Of course, the more the disease has been confined to the structures of the articulation itself, and the less the bone has suffered, the greater will be the probability of a successful result.—I may here remark, that in operating upon the elbow-joint, the inner incision should be carried close to the olecranon process, so as to run no risk of injuring the ulnar nerve, which should be then drawn inwards by a metal retractor. It will not be injured by this step; being protected by the adipose tissue, in which it lies imbedded, and by which, indeed, it is completely hidden. The outer incision should be made sufficiently distant from the olecranon to leave the extent of space required for the removal of the diseased parts; which is much facilitated by flexing the elbow-joint, after the transverse incision has been made. It has been recommended to divide the triceps muscle

from the olecranon preliminarily, in order that, after the latter has been removed, it may be re-united with the ulna; but I do not think that such a union can occur, except by means of adventitious matter, which in all cases is deposited, and which is always sufficiently firm and continuous to maintain the function of the muscle, and protect the posterior part of the new joint.

With respect to the results and general bearings of the operation, I think the principal benefit derived from it is, that it lays open and perfectly exposes the affected tissues, and thus facilitates their separation; in order to effect which, Nature would otherwise have to form sinuses and ulcerations. The advantage gained by it is better estimated by the extent of surface exposed, than by the quantity of bone removed; no more of which should be brought away than is evidently affected by disease, which, we shall generally find, is confined to the articulating surfaces.

Great care is requisite as to the angle at which the limb is kept during the progress of anchylosis: for if it is finally left in an awkward position, it is not very uncommon for patients to desire amputation, rather than be burthened with a useless member.

Guy's Hospital Reports, Oct. 1, 1841, *p.* 373.

72.—GRUBER'S EAR SPECULUM.—LAPIS DIVINUS IN OTORRHŒA.

By J. H. Curtis, Esq., Surgeon to the Royal Dispensary for Diseases of the Ear.

[In examining the meatus auditorius externus in cases of otorrhœa, Mr. Curtis uses Gruber's speculum, which differs both from Kramer's and Itard's]

Inasmuch, says Mr. Curtis, as the shield does not form one solid piece with the remaining portion of the instrument, but can be detached from it, and left behind in the meatus, to protect its parietes, while caustic or other applications are made to the diseased parts. By the means of an adapting screw, connecting the handles, they may be kept more or less apart, at the will of the operator, and according to the exigencies of the case.

The surgeon is better enabled to attend to the case, and to do whatever is requisite, when both his hands are at liberty, as they are when the shield can be detached from the handles and left in the meatus, than if one of the hands was employed grasping an unwieldy instrument, to say nothing of the danger of an unforeseen movement of the patient throwing the speculum out of its place, and, perhaps, doing other mischief.* When I am desirous of ascertaining the exact condition of the membrana tympani, after I have passed the speculum, I am in the habit of using Gruber's lamp, which has a strong reflecting lens attached, by which the light is powerfully thrown into the meatus, and on the membrane, in such a manner that its pathological condition can be readily ascertained. I have found it of material service in making those investigations into the state of the meatus, which are requisite in all cases of otorrhœa.

[Mr. Curtis then goes on to describe a very useful preparation in cases of discharge from the ear, viz. the lapis divinus. He says:]

When visiting the hospitals at Prague, I found the lapis divinus in very general use in the treatment of otorrhœa, and I afterwards found it employed in a similar manner at Vienna, Munich, Berlin, Leipsic, and Hamburgh. At Prague I procured some of the lapis divinus, and the formula for its preparation; the latter is as follows:—Take sulphate of copper, nitrate of potass and alum, of each sixteen parts—powder them separately, and then mix them well together; fuse them in a glass vessel in a sand-bath, and add one part of powdered camphor; break the mass in pieces when cold. This formula is varied in different pharmacopœias, there not being quite so much of the principal ingredient, the sulphate of copper, in some, while others substitute the acetate for it; for my part I prefer the sulphate. On my return to this country I determined to give it a trial, and have experienced much advantage from its use, as the following cases will testify. I should state, however, that the preparation I employ consists of two drachms of the lapis divinus dissolved in an ounce of distilled water, a drachm of this solution being added to six ounces of rose or distilled water; this latter con-

*As the shield is composed of two half pieces, one or both may be retained *in situ* according to whether it is required to make the applications to the membrane of the tympanum, or to the lining membrane of the meatus itself.

stituting the injection I recommend, and which I direct to be thrown into the meatus twice a-day. I begin with a weak solution, increasing the strength as I find it can be borne by the patient. Thus used, it does not cause any pain; it acts as a mild stimulant and astringent, and gradually produces a cessation of the discharge.

Case 1.—Mr. M., of Dublin, aged fifty, has had a discharge from the left ear for sixteen years, attended with deafness consequent on fever; on examination with Gruber's speculum and lamp an ulcer was detected on the membrane of the tympanum, which membrane was perforated by it. The treatment just described was adopted; he came to me for about a month, during which time he improved materially; he afterwards pursued the same plan under my directions; the ulcer healed up, the discharge ceased, and a cure was effected, his hearing being at the same time restored.

Case 2.—Mrs. F., the widow of a clergyman, deaf seven years with the left ear. attended with a profuse offensive discharge, tinged with blood, which she attributed to having caught cold in her confinement. It was a singular and interesting fact in this case, that the discharge seemed to alternate or be vicarious with the catamenia, diminishing when they were present, increasing on their cessation. Inspection by Gruber's lamp and speculum showed on the membrana tympani a large ulcer with rough edges, and inclined to bleed. The edges were were touched with a strong solution of the lapis divinus by means of a bougie passed into the ear, the meatus being protected by the shield of the speculum, which had been previously applied with that view. Under this treatment the ulcer improved, and a cure was gradually effected by means of a weak injection. The progress of the case was somewhat retarded by erysipelatous attacks affecting the auricle: an alterative plan of treatment was adopted in this case.

Case 3.—John Poverell, aged fourteen, a dispensary patient, has laboured under a very offensive discharge from the ear, tinged with blood, and attended with partial deafness for three years, the sequelæ of scarlet fever. The membrane of the tympanum was sound. The injection was used for three weeks, at the end of which time he was cured of the discharge, and had regained his hearing.

Case 4.—Mary Lowers, aged thirty-seven, a dispensary patient, has been quite deaf for ten years with otorrhœa and polypus, resulting from a cold, according to her account. The polypus was removed with the aid of the forceps, and the neck touched with a strong solution of the lapus divinus, the meatus being protected by the shield of the speculum. Under this treatment, jointly with the use of the injection, the part healed, the discharge ceased, and the hearing was restored.

Lancet, July 3, 1841, *p*, 510.

73.—IODINE IN OPACITY OF THE CORNEA.

By Dr. Lohsse.

The case in which this remedy was successfully employed was one of opacity of the cornea consequent on syphilitic ophthalmia, and so considerable as almost completely to destroy vision. The iodine was given internally, and from four to six drops of the following collyrium were let fall into each eye three times a day.

℞. Iodini, gr. j.; Potassii iodidi, gr. ij.; Aq. dest. ʒ vj. M.

Afterwards this was exchanged for an ointment consisting of iodine, gr. jss., iodide of potassium, ϑj., and lard, ʒ ss., of which a small portion was once or twice a day put between the eyelids. The cure was perfected in three months.

British and Foreign Medical Review, July 1841, *p.* 258.

74.—USE OF COMPRESSION IN MAMMARY ABSCESS.

By MM. Trousseau and Contour.

In this memoir there are two distinct parts; one devoted to the description of abscesses of the breast, the other intended to recall the attention of practitioners to a curative means too much neglected in their treatment, namely compression. The following is the mode in which it is to be applied:—It is to be accomplished by strips of plaster, broad, and sufficiently long to go several times round the body. The surgeon standing by the side of the patient, must first fix one of the extremities of the strip at about the middle of the back, then carry it towards the side of the chest, then pass it over the breast, beginning from

the lowest part, then obliquely from below upwards to the outer third of the clavicle on the healthy side, and then obliquely downwards across the back, so as to cover the extremity of the slip already fixed. Following this course several times, he must take care that the portion of the band applied each time covers the two upper thirds of the preceding turn. But it is easy to see that if the bandage is always carried in the same direction, the breast cannot be completely covered; and that, on the other hand, as its several turns go across the clavicle of the healthy side, the movements of the shoulders would tend to displace it, and the lower part of the breast might soon be uncovered. Other strips of plaster are therefore applied, which, proceeding from the anterior and upper part of the abdomen, ascend, crossing the first obliquely; then pass under the axilla, and return, after passing over the posterior part of the chest, to the part where they were first applied, and then are carried again along the same track, covering each time the two upper thirds of the strip last applied. The breast is thus completely covered by the bandage, which is prevented from rising by this last described, which ought to cover only the upper part of the breast.

To compression thus employed the authors attribute many advantages. In the first place, it immediately relieves the pain; it combats and diminishes the inflammatory engorgement, at whatever period it is applied. When employed after opening the abscess, it decidedly favours the evacuation. And although when employed too long, at a period when the process of suppuration is active, it might have the disadvantage of making the pus extend over a larger surface, yet this may be avoided by removing the bandages at a time when it is probable that matter has fairly formed. If this be done, and the abscess opened, the bandages may be again applied, after two or three days poulticing, with good effect.

Med. Gazette, Sep. 10, 1841, *p.* 959.

75.—ON THE APPLICATION OF OIL VARNISH TO THE IMMOVEABLE APPARATUS, IN FRACTURES OF THE LIMBS OF CHILDREN.

By M. Tavignot, House-Surgeon of the Hospital of Children's Diseases.

When the common immoveable apparatus is applied to the fracture of the lower limb of a young child, at the end of two

or three days it becomes perfectly moveable by saturation with urine, and therefore totally incapable of maintaining the fractured parts in apposition. After some trials with glazed silk and spirit-varnish, which were soon permeated by the fluid, M. Tavignot found that oil-varnish answered the purpose extremely well. The best mode of using it is to apply the starch-bandage first, and this having become completely dry, a layer of the varnish is to be smeared over its whole external surface, and also over its superior border and part of its internal surface by a fine brush. The limb is then to be exposed to the air in warm weather, and to artificial heat in winter. Another layer of varnish is to be applied in about two hours, being applied especially on the parts of the limb most exposed to the action of the urine. When the layer has dried, the ordinary coverings of the limb may be replaced, and the urine then glides over the surface of the bandage with great facility without affecting it in the least. M. Tavignot has placed a bandage thus prepared in constant contact with urine, by putting it into a vessel full of this fluid without altering its consistence in any degree.

This is not the only advantage, for the apparatus can be removed without cutting the bandages, by placing the child in a warm bath, for the water insinuates itself between the bandage and the limb, and so softens the former by dissolving some of the starch, that the limb is readily unrolled.

Paper steeped in this varnish appears likely to prove highly useful to the surgeon in protecting parts exposed to the action of acrid or irritating fluids.

[The composition of this varnish is not given. It is probably the common size-varnish of our oil-shoes.

British and Foreign Medical Review, Oct, 1841, *p.* 544.

76.—EXTRACT OF BELLADONNA IN THE REDUCTION OF PARAPHIMOSIS.

By Dr. Mignot, of Bordeaux.

A child, three years and a half old, was the subject of severe paraphimosis; the glans red, swollen, and tender; the prepuce strongly drawn back, forming a thick and apparently adherent ring, the constriction of which completely stopped the circula-

tion. This state had lasted eight days, and the sufferings were excessive. Reduction being impossible, leeches were applied to the perineum and hypogastrium; cooling drinks, emollient enemata, cataplasms, lotions, and hip-baths were used, but they only gave slight relief and but for a short time. The strangulation became more menacing, and all the symptoms were aggravated; the glans was bluish and gangrene was threatened, when M. Mignot employed frictions around the glans, with an ointment composed of thirty parts of simple cerate to twelve parts of extract of belladonna. Under the influence of this remedy the circle of constriction relaxed, dilated, and the tissues gradually recovered their normal condition, without loss of substance or suppuration following.

The second patient had acute balanitis, brought on by a severe gonorrhæa, and followed by paraphimosis. The patient refused operation although gangrene was threatened, when the belladonna was applied, which induced relaxation and rapid amendment. It was also applied in a case of phimosis accompanied by chancres and a sympathetic bubo, and three days after its employment the dilatation of the preputial orifice was complete.

British and Foreign Medical Review, Oct., 1841, *p.* 556.

77.—REDUCTION OF HÆMORRHOIDAL TUMOURS.

Much difficulty is sometimes experienced in returning protruded hæmorrhoids. Pressure alone is applied in vain. But if the patient be directed, Dr. Marshall Hall says, to make a forcible expulsive effort, and pressure be simultaneously made, the tumour frequently recedes immediately, the sphincter is positively relaxed, the ligature which it formed round the tumour is removed, and the reduction is easy.

Dr. Hall inquires whether a similar measure would aid the accoucheur in returning prolapsus uteri?

American Journal of Medical Science, July, 1841, *p.* 201.

78.—TREATMENT OF URINARY FISTULÆ.

By M. Ricord, Paris.

At the meeting of the Académie de Médecine on the 20th of April, M. Ricord presented a patient whom he had cured of

a urethral fistula, situated at the inferior part of the penis, by means of an opening made into the membranous portion of the urethra, through which he introduced a catheter into the bladder. This catheter he allowed to remain; and when the urine had ceased to flow through the primary fistula (which was not till after two months had elapsed), M. Ricord revivified its edges, and then united them with sutures. When the union was completed, the urine again took its normal course, and the opening made in the perineum soon after cicatrized.

Medical Gazette, Aug 6 1841, *p.* 766.

79.—ISINGLASS PLASTER.

Mr. Liston has for many years been in the habit of using, after operations and for other surgical purposes, a plaster, consisting of oiled silk covered with a coating of isinglass.

The following is the method of preparing it:—Moisten an ounce of isinglass with two ounces of water, and allow it to stand for an hour or two until quite soft; then add three ounces and a half of rectified spirit, previously mixed with one ounce and a half of water. Plunge the vessel in a saucepan of boiling water, and the solution will be complete in a few minutes.

Having stretched the oil silk on a board, by nailing it round the edges, apply the solution of isinglass with a brush, taking care to move the brnsh evenly and in the same direction. making it smooth as you proceed—as in varnishing a picture, When quite hard and dry, apply another layer, in the same manner, but moving the brush in the opposite direction, in one case horizontally, and the other perpendicularly. In this manner apply four coats of the solution, or even a fifth, if the surface be not entirely smooth. The last layer should be reduced in strength by the addition of a little more water and spirit. An ounce of isinglass is sufficient for about a square yard of the plaster.

The following precautions should be observed:—the distance between the nails should not be more than an inch and a half, otherwise the oil silk will shrink in festoons, and will not remain flat. The isinglass must be well soaked in water before the spirit is added, otherwise it will not make a complete solution: and the spirit, when added, must be diluted with a portion of

the water, to prevent precipitation of the isinglass. The brush must be a flat "hog tool," such as is used for spirit varnish, and well made, otherwise the hairs will be found to come out, and this is an inconvenience, as the operatiou must be performed quickly while the solution is warm. The solution, when cold, should be of the consistence of blanc-mange.

Repeated experiments have shewn that gelatine does not answer the purpose as a substitute for isinglass, either alone or in any proportions. A sample is on the table, in which the first three layers were composed of a mixture of the two substances, and the last is pure isinglass; in another sample only isinglass was used, it will be seen that the latter is much more adhesive.

The oil silk has been, in a great measure, superseded by the use of a membrane, consisting of the peritoneal covering of the *cæcum* of the ox, rubbed down and carefully polished in the manner in which the common goldbeater's skin is prepared. The following is the report of this plaster, furnished by Mr. Ancrum, Mr. Liston's assistant at the North London Hospital.

From the extreme thinness of the plaster, the wounds can be examined without its removal. It adheres much better than plaster made with isinglass spread on silk; and in the first instance of its application becomes firmly fixed. It is difficult to fix the isinglass plaster spread on silk, unless it is very good. From the extreme tenuity of the membrane plaster, it is equally unirritating with goldbeater's skin; and when once applied it remains so accurately adherent, that it does not require to be changed for many days. Altogether, after a good deal of experience in all the different plasters, we find it the best uniting material that has ever been produced.

In applying the isinglass to the membrane plaster, the directions already mentioned, with reference to the oil silk, may be observed, but a layer of drying oil is spread on the other side of the membrane.—*Pharmaceutical Transactions.*

Medical Gazette Oct. 15, 1841, *p.* 125

80.—CURE OF CROOKED NOSE BY SUBCUTANEOUS DIVISION OF THE CARTILAGES.

By Prof. Dieffenbach.

[Dr. Dieffenbach remarks that the wrynose is either a natural deformity, or is caused by accident. He has operated in two

cases with complete success: in one the deformity was congenital and in the other it was caused by a fall. He thus describes the operation:].

With a small curved bistoury I made a puncture by the side of the bridge of the nose, at the point of union between the cartilage and the bone, the bistoury was then carried under the skin, so as to separate the cartilage of the side and bridge of the nose from the bone. By a second puncture, on the other side, the middle partition of the nose and the cartilage of that side were divided.

The nostrils were then stuffed with lint, and the nose retained in its proper position with strips of plaster. The parts healed quickly, without inflammation or suppuration.

Wochenschrift fur die ges Heilkunde, 1841, *p.* 617.

81.—CURE OF THE SLIGHTER DEGREES OF STRABISMUS WITHOUT DIVISION OF TBE MUSCLES.

By Prof. Dieffenbach.

Dr. Dieffenbach states that he has cured the slighter degrees of strabismus by snipping off a piece of the conjunctiva with the subjacent cellular tissue, near the insertion of the rectus muscle on the side from which the eye diverges. He states, that a larger piece of the conjunctiva must be removed when the eye is turned outwards than when it is turned inwards, because when the eye is turned inwards it is generally occasioned by the greater power of the internal rectus: but when the eye is turned outwards there is generally paralysis, or, at least, a weak state of the rectus internus.

Wochenschrift fur die ges Heilkunde, 1841, *p.* 581.

82.—HEREDITARY PTOSIS.

By Signor Alessi.

In the Gazette Medicale we have an extract from an Italian medical journal giving an account of a very extraordinary case of hereditary ptosis. The patient presented himself to M.

Alessi with chronic ophthalmia of the right side, when he observed that the upper eyelid of the left side was so relaxed as to cover about a third of the pupil. On questioning the patient it was found, that this affection was hereditary, his father having suffered from it, as well as his son and grandson; and to increase the singularity of the case, the deformity changed side with each generation. M. Alessi visited, and examined the man's son and grandson, and found them affected as had been described. He attributes it not to atony of the elevator muscle, or paralysis of the 7th pair, &c. but to a flattening of the supra ciliary ridge, especially towards the outer angle: so that the integuments, not being supported on the usual prominence, fall over the eye-ball.

Gazette Medicale.

33.—MALIGNANT LOOKING ULCERS OF THE FACE, REPUTED CANCEROUS, CURED BY ANTI-SYPHILITIC REMEDIES.

By M. Payan.

Three very interesting cases are narrated by M. Payan, surgeon to the Hôtel Dieu d'Aix. The first, a woman aged fifty-two, had frequented the hospital two years, for an ulcer, which commenced at the root of the nose, eating away the skin, subcutaneous cellular tissue, and at length producing caries of the nasal bones, and opening a passage into the nasal fossa. She had undergone the usual routine of treatment without any benefit; herself, and surgical attendants deeming the ulcer cancerous. Suspecting from other causes, that she was affected with syphilis, at the time when it commenced, M. Payan prescribed the usual anti-syphilitic regime, which he uses when the system has become profoundly affected, viz. mercury, so as to affect slightly the system, sudorific tisan, and a dry farinaceous diet. This treatment commenced June, 1838; after pursuing it for twenty-eight days, an evident amelioration took place: the mercury was suspended for eighteen days, when it was again given. The ulcer daily improved, the edges cicatrized, and on the 13 Sept., instead of an ulcerating surface, a small foramen only was visible.

Case 2.—March 12th, 1840, a robust looking woodman, presented himself at the hospital with a suspicious looking ulcer on the upper lip, with the desire of having it excised, as his medical attendant had told him that it was cancerous. The surrounding tissues were hard, and had a true scirrhous appearance. On interrogating the patient, he was led to suspect its syphilitic origin, and prescribed mercury and sarsaparilla internally, and mercurial frictions around the ulcer. April 4th, the mercurials were suspended on account of the ptyalism induced: the sarsaparilla was continued till the 26th April, when the ulcer was entirely healed, and the patient discharged cured.

M. Payan mentions another case, in which an ulcer on the side of the forehead, though evidently syphilitic in its origin, presented a somewhat cancerous appearance. General anti-syphilitic remedies had been used without any benefit, mercury internally, sarsaparilla, preparations of gold, &c. The writer prescribed a local application of mercury in the form of a solution of the bichloride in water. On the 26th day after the application, a regular cicatrix replaced the ulcers, which for several years had appeared intractable.

Gazette Medicale.

84.—OCULAR MYOTOMY IN CERTAIN CASES OF AMAUROSIS.

By M. Petrequin.

M. Petrequin of the Hôtel Dieu de Lyon, has made a communication on this subject to the Academie des Sciences of Paris. "The theory of analogues rendered it probable, and strabotomy has demonstrated, that the motor system of the eye exercises considerable influence over its nervous system. From what I have observed in those who squint, I have been led to conclude that certain cases of amaurosis have for their primary cause a spasmodic condition of one or more of the muscles surrounding the globe of the eye. It is now a scientific fact, that muscular spasm exists in strabismus, it is not less true that in most cases, there is also considerable weakness of vision in the deviating eye. Myotomy then may become an heroic remedy against amaurosis depending on contraction of the muscles."

The author of the report then gives two cases, one of amaurosis of the left eye, in which the light returned immediately and completely after the operation. In the other the amelioration, though decided, was not so perfect.

SUBCUTANEOUS MYOTOMY IN ENTROPION.

M. Petrequin in the same report recommends subcutaneous myotomy for certain cases of entropion. He says, "I have recognized the fact, that there are certain cases of entropion produced exclusively by a permanent contraction of the orbicularis muscle. The blepharospasm so often accompanying scrofulous ophthalmia, has at once served as an indication and a proof of this fact. This, then, is truly a *muscular entropion.*"

He gives a case of complete success, in which he performed the operation in the following manner. He planted the instrument on a level with the floor of the orbit, (the lid being held extended,) passed it under the skin, and the orbicularis, up to the free edge of the eyelid, taking care that no fibres escaped division superiorly; the instrument was then carefully withdrawn, assisting the division by pressing on the eyelid with the finger.

Gazette Medicale.

85.—SUTURE OF THE CONJUNCTIVA AFTER DIVISION OF THE ADDUCTIOR.

By M. Cunier.

M. Cunier has addressed a letter to the Academie des Sciences, from which the following is extracted: "In order to avoid the prominence of the globe of the eye, which l m ost always takes place in consequence of the fall of the caruncula lacrymalis in the internal angle after division of the adductor, for convergent strabismus, I have used the following means:— By aid of a very fine curved needle, I pass a suture through the two flaps of the conjunctiva. Adhesion takes place on the third day, when I draw the suture away. The thread I use is not waxed. It never produces any sensation, nor the slightest inconvenience. I have used more sutures when the wound was extensive. It is not prudent to retain the edges of the wound

in immediate contact, which might cause the strabismus to continue after the operation: the design of the suture is to maintain the caruncula in its place.

When the eye has been drawn outwards after division of the internal rectus, I have succeeding in retaining it exactly in its proper position by means of a suture at the inner canthus.

I have used the suture in more than 100 cases, and always avoided the deformity of the inner acanthus, justly mentioned as one of the imperfections of the ordinary method of strabotomy."

Gazette Medicale.

86.—EFFECTS OF IMMOBILITY ON THE ARTICULATIONS.

By M. Teissier.

M. Malgaigne has shown in a very interesting treatise that any apparatus, which renders completely immobile the articutions of a fractured limb, brings on, more frequently than is supposed, an impossibility of moving these joints. He supposed that this is owing to the formation of false anchyloses. The writer of this article goes further, and states, that a true anchylosis often ensues. He brings forward three cases of anchylosis of the patella with the femur, to which naturally there is is no predisposition. "It has been objected that these anchyloses may result from the inflammation produced by the fracture extending to the joint, and not simply by its immobility. But we have shown that they frequently occur in joints far removed, as in the ancle after fracture of the thigh. Anchylosis produced by fibro-cellular bands, has been often observed, here it is plainly owing to loss of motion." Hence

1st. It is dangerous to imprison for several months, in an immoveable apparatus, the articulations of a fractured limb.

2nd. That the joints should be left free to execute movements sufficient to induce the synovial exhalation.

3rd. That we should commence gentle motion as soon as the callus is formed.

Gazette Medicale.

87.—PSEUDO-STRANGULATIONS OF HERNIÆ.

By M. Malgaigne.

[M. Malgaigne has presented a very interesting paper on this subject to the Academie Royale des Sciences, of which the following is a short *resumé*.]

The writer first attacks earnestly the proposition laid down by Pott, "that the operation for hernia is not dangerous in itself," and which has exercised such a pernicious influence over modern principles. He says, "In order to establish the true chances of the operation, I have collected all the operations of hernia which have been performed in Paris by myself and colleagues, during a space of five years and some months from 1836 to 1841. I have found that in one hundred and eighty-three operations there were one hundred and fourteen deaths; as to age, I have found that from fifty to eighty years there were seventy deaths in ninety-seven operations, that is, about three-fourths."

As to the cause of hernia, "authors state that *l'engouement* from accumulated fæcal matter produces it. It is true, then, that excrements do habitually accumulate in hernias of some standing? There is not, there cannot be hard substances, nor even fæcal matter except in the large intestines; and hernias of the large intestines do not constitute a twentieth part of intestinal hernias. Thus, then, this *engouement* described in books cannot possibly exist in ninety-five cases out of one hundred; and even in hernias of the large intestine, never have I found a single case in which there was accumulation of fæcal matter. I go further, I have collected all the authors I have been able to procure, I have collected all the cases in which the cause of the disease has been made manifest, either by operation or autopsy, and have only met with one case in which there was really accumulation of fæcal matter in the intestine."

"I have, like all other surgeons, paid fatal tribute to this fatal doctrine; I operated in a case of pretended *engouement*—there was neither engouement, nor strangulation, and the patient died. You will find mistakes of the same kind committed by Percival, Pott, Dupuytren, and Astley Cooper. As to the *engouement* of authors, it is a creation of pure imagination, it is really a hernial peritonitis disguised, which is the accident most commonly supervening in cases of hernia."

As to the means of discriminating between this inflammatory action, and real strangulation, he brings forward the following propositions :—

1st. In an old intestinal herniæ, which have never been restrained by a truss, or in which the truss has been disused for a long time, there is no real strangulation; the ring or rings being much larger than is required by the size of the pedicle of the hernia. This general fact results from all the observations which I have made either on the living or the dead. I have found no exception.

2d. In the pure epiplocles of whatever size, it is most frequently either an adhesive or suppurative inflammation, which is mistaken for strangulation.

3d. Consequently in these two cases, when well marked, the operation is always irrational; and, besides taxis at the beginning or end of the inflammation, the treatment should be entirely antiphlogistic.

Gazette Medicale.

88.—CYANIDE OF POTASSIUM IN ACUTE ARTICULAR RHEUMATISM.

By M. Malherbe.

M. Malherbe gives a cases of acute rheumatism attacking the articulations of a chlorotic young female. Leeches were twice applied, with temporary relief, but followed by a relapse of the severe pains. He then prescribed compresses to be applied over all the joints affected, and moistened with a solution of cyanide of potassium, (10 grs. to one ounce of distilled water). In forty-eight hours the rheumatic pains had entirely ceased.

[This appears a valuable addition to our sedative remedies in this troublesome disease. It has been previously recommended by Professor Trousseau, as a local application in severe headache, and in other neuralgias.]

Journal des Connaissances Medico-Chirurgical.

89.—ON CLUB FOOT.

By Dr. Guerin, Paris.

[In an elaborate paper on this deformity, this eminent practitioner sums up his views as follows :]

1st. All the forms or varieties of congenital club-foot are the result of muscular retraction, the elements of which are differently distributed and combined in the muscles of the leg and foot; the retracted muscles in each variety of club-foot are those whose temporary contraction causes a similar physiological movement; whence it results, that every club-foot is but the permanent exaggeration of the form of a corresponding physiological motion of the foot.

2nd. All the varieties of club-foot are simple or compound; simple, when they are exclusively the result of retraction of the muscles which preside over the special form of the variety; compound, when to retraction of these muscles is joined, but in different degrees, that of the greater part of the muscles of the foot and leg; in such a way that the same muscles may be retracted in the different varieties of club-foot, and the varieties of this deformity are as often due to the combination of the degrees of retraction as to its situation.

3rd. The special forms of pes equinus are the product of retraction of the gastrocnemii, solei, and flexors of the toes; those of varus of that of the anterior and posterior tibialis; those of valgus of the lateral and anterior peronei; those of talus of the anterior tibialis, the long extensor of the toes, and the anterior peroneus, with complete or incomplete paralysis of the gastrocnemii and solei. The forms of the varieties of association which result from the combination of these principal varieties amongst themselves are the product of the simultaneous retraction of the same muscles, to which must be added, as accessary or complementary elements of deformity, retraction of the short extensors or flexors of the toes; of the abduction of the great and little toe and of the plantar aponeurosis; in a word, of all the muscles of the leg and foot.

4th. The surgical treatment of congenital club-foot ought to comprehend the section of the tendons of those muscles, whose retraction causes the pathological form of the foot; when the heel is elevated, the tendon Achilles; when the foot is turned on its external edge, the tibialis anticus; when on its internal the anterior peroneus and the whole or part of the extensor of the toes; for forced adduction of the foot, the tibialis posticus; for abduction, the peronei laterales; for curvature of its internal edge, the adductor of the great toe; for extension on permanent flexion of the toes, the section of the tendons of the correspond-

ing muscles; and finally, the simultaneous section of the tendons of those muscles, whose simultaneousness of retraction causes the different combinations of form which club-foot presents.

5th. The mechanical or consecutive treatment of club-foot ought to rest on the same data; that is, we should employ apparatus, the centres of motion of which ought to answer to the centres of motion of the displaced articulation, and whose efforts should act in a direction exactly opposed to the action of the retracted muscles.

Dublin Journal of Medical Science, Nov. 1841, *p.* 198.

90.—NEW SYSTEM OF BANDAGING.

By M. Rigal. of Gaillac.

The object of this memoir, which was read at the Royal Academy of Medicine in November, 1840, is to point out the advantage obtained by the use of strips of indian rubber in the place of common ligatures and bandages, made elastic by means of the same material, in place of the common roller. The author has used them for the last two years, and speaks very highly of their power of maintaining parts in apposition during the most varied movements of those parts. He particularly instances hare-lip, and the operations for the restitution of lost parts. The elastic bandages are also said to be very useful in maintaining oblique fractures of the lower extremities in perfect apposition, opposing a force in constant operation to the irregular action of the displacing muscles. In this way also they may assist in the replacement of parts after tenotomy.

British and Foreign Medical Review, July 1841, *p.* 252.

91.—ON EXCISION OF THE ELBOW JOINT.

By M. Roux.

Since 1812, M. Roux has performed excision of the elbow-joint eleven times, the whole of the articulation having been removed in every case. Of these eleven patients three have died; six reaped every benefit which could arise from the operation. The patient operated on in July, 1839, can flex and

extend his arm imperfectly, while a few fistulæ still remain in the patient operated on last November. M. Roux formerly practised the operation of Moreau, making an external and internal vertical incision, and one transverse below the olecranon, but now he only makes an external and a transverse incision, the triangular flaps thus formed being quite sufficient when turned back to expose the articulation for removal, while the subsequent union is much more rapid than when an internal incision is also made.

British and Foreign Medical Review, July 1841, *p.* 253.

92.—TREATMENT OF RECTO-VAGINAL FISTULÆ.

By M. Petrequin.

M. Petrequin, the chief surgeon of the Hotel Dieu at Lyons, whose name is not unknown to our readers, has published at greath length a case of that most distressing and often intractable accident, rupture of the recto-vaginal septum, successfully treated by operation. He justly remarks, that it is to M. Roux that surgery is indebted for the most valuable suggestions and precepts on this subject. It was he who first substituted the *quilled* for the *interrupted* and the twisted sutures in the approximation of the edges of the wound, and it is to this important modification that the success of his operations is mainly attributable. Two years ago he had performed and adopted this practice in eleven cases; in six of these the patients were cured by the first operation; in two it required to be repeated a second time; two patients died; and in the remaining case the wound gave way on the 14th day after the operation, during the effects of defecation. No other mode of operating presents so satisfactory a result—eight cures in eleven cases.

The following is an abridged report of M. Petrequin's case.

A woman, 28 years of age, had a protracted and severe labour with her first child; when the child was expelled, the perineum and recto-vaginal septum were found to be lacerated. Eight months after this date, she was admitted into the Hotel Dieu at Lyons, under the care of M. Petrequin. The entire extent of the perineum was lacerated, and the laceration extended into the rectum for 14 or 15 lines in depth; the constrictor muscle of the vagina and the two sphincters of the anus,

with the exception of a few fibres of the upper one, were divided; the double ano-vulvar orifice was confounded in one large opening, and constituted a veritable cloaca, into which the excretions of the alimentary, the urinary, and the genital organs were received. The vagina and the os tincæ were the seat of minute ulcerations; and the general health had suffered considerably. The patient was therefore treated for some time with injections of a weak solution of the chloride of lime; and the os tincœ was occasionally touched with alum. After some time the general as well as the local health became much improved, and M. P. proceeded to the operation. The edges of the fissure being very finely pared, partly with the bistoury and partly with scissors, he inserted three curved needles, each armed with a double stout thread, through the two sides of the wound, taking good care that they penetrated to its deepest part. The ends of the ligatures were subsequently secured over two pieces of caoutchouc bougie placed along each side of the fissure.

As the lips of a wound always gape somewhat when a *quilled* suture is used, M. P. took the precaution of passing two stitches of the *interrupted* suture, so as to bring them in closer approximation.

The bowels having been kept well open for several days before the operation, opium, in the form of extract of syrup, was given afterwards to confine them, and the patient was put upon a very low regimen in order to prevent the necessity of defecation for several days. A catheter was also left in the bladder, so that the patient could relieve herself, when necessary, by merely withdrawing the plug. The vagina was freed from any purulent or other discharge, by means of mild emollient injections, morning and evening. On the the third day the patient had a liquid stool without any prejudice to the sutures. There was no evacuation of the bowels again until the eighth day, and then without much effort: the edges of the cicatrix at the anus were slightly disunited in consequence. On the following day the stitches and the pieces of the bougie were removed, the cicatrisation of the anterior three-fourths of the wound, at least, being by this time nearly complete: the the patient began to take vermicelli soup, and the dose of the syrup of poppies was reduced to 16 *grammes*. On the eleventh day, there were two stools; and again there was a very slight laceration of the cicatrix near the anus; but the union in the perneum seemed to be

complete.* On the eighteenth day, a superficial ulceration made its appearance in the perineum: by touching it however with a portion of alum it disappeared in the course of two or three days.

As remarked by M. Roux, there remained in all his cases a small aperture of communication between the rectum and the vagina for a considerable time after the perineum had completely united. M. Petrequin had for some days hoped that he had been more fortunate, and that the recto-vaginal septum had perfectly cicatrised, as no portion of a fluid injected into the vagina passed into the rectum. But this hope proved in a few days to be deceptive. With the exception of this minute aperture between the two passages, the whole extent of the fissure was completely cicatrised, when the patient left the hospital on the 15th of August, 35 days after the operation. Unfortunately the poor creature caught cold when she returned home, and was seized with fever; she was brought back to the hospital, a fortnight after her leaving it, in a dying state. On dissection, it was found that the circumference of the anus had been attacked with ulceration, which had been extending deeper and deeper in, so as to affect the sphincter muscle and give rise to two small fistulæ. The perineum, however, remained firm and perfectly united; and the recte-vaginal septum was closed, with the exception of one point, where an oval aperture, which communicated with the two passages, existed: its edges were hard and resisting. Thus the large lacerated opening, which originally existed, had been reduced to a small fistulous aperture; and we have every reason to believe, from the experience of M. Roux, that this would have gradually closed.

In closing the report of this case, it is impossible not to admit the great superiority of the *quilled* over every other kind of suture in the treatment of recto-vaginal fistulæ. The introduction of this great surgical improvement we owe entirely to the sagacity of M. Roux.

Medico-Chirurgical Review, July 1841, *p.* 210.

* M. Roux has remarked on the tediousness of the healing of the fissure near to the anus,—"In all the cases, the edges of the division next the anus were disunited or rather separated, although ultimately they closed. At this point the wound was slightly gaping, and looked like that which is caused by the operation for fistula ani. But this fissure has in every case eventually disappeared, and the anus has recovered its normal condition.

93.—EXTRACTION OF A GOLD PIN PASSED FAR INTO THE URETHRA.

By Dr. Boinet.

[The following case may probably be interesting to the reader, and may suggest a similar practice in such unusual cases.]

I was called some time since, to visit a young man, who for the purpose of excitement, had introduced a gold pin into the urethra, into which it suddenly slipped from his grasp and disappeared. It was more than two inches long, and the head which had been pushed in first was as large as a hemp-seed. In his attempt to push it out again he had made it go further towards the bladder, and when I came to him the head of the pin was in at the membranous part of the urethra. I could easily put it in the perineal region, and applying my thumb on the head to prevent its going on towards the bladder, I tried to push it out of the canal, pressing in the direction opposite to that by which it had entered, and at the same time pulling the penis, to prevent the point from catching in the folds of the mucous membrane. But, in spite of all my precautions, my attempts appeared to make it go towards the bladder, especially whenever I tried to disengage the point from the mucous membrane into which it kept running. I had scarcely any instruments with me, nor indeed would any ordinary ones have been of any use; therefore my endeavours to draw it out were unavailing.

I now determined to run the point of the pin through the wall of the urethra, and then to turn the pin end for end, and push the head towards the external orifice. This I accomplished in the following manner:—With the left thumb I firmly fixed the head of the pin, and then bending the penis double at the part where the point of the pin lay, I made the latter pass through the wall of the urethra, and drew out all but the head, which now lay where the point had just previously been. This done, I carried the shaft of the pin backwards, and so made the head more forwards, and then pushing on the shaft from behind forwards, I pushed the pin head first towards the external meatus, through which I now easily drew it out with a pair of dressing forceps. In a word, to perforate the urethra from within

outwards, to turn the pin, to push it on, and to extract it—such were the manœuvres of this operation.

The consequences of this perforation were of the simplest kind: the patient scarcely ever felt a pricking in making water. Three days after he was perfectly well. Subsequently, however, in consequence of a severe and maltreated gonorrhœa, an abscess formed around the urethra, and was followed by a fistulous opening; but it was remarkable that this opening was situated at a considerable distance from the part at which the urethra had been punctured.

Medical Gazette, Sept. 3, 1841, *p.* 227.

94—REDUCTION OF A STRANGULATED HERNIA, APPARENTLY EFFECTED BY ACUPUNCTURE.

By Dr. Daser.

A man, 50 years of age, was seized with strangulated hernia, with vomiting of stercoral matter, and all the other usual symptoms. The taxis having failed, Dr. Daser, before having recourse to the operation for strangulated hernia, with the view of trying the effect of acupuncture, for the purpose of evacuating the gaseous contents of the strangulated portion of intestine, made two punctures in it with a long fine needle. No gaseous matters apparently escaped, but the patient complained of acute pain, and loud gurgling sounds were heard in the abdomen, immediately after which the hernia was spontaneously reduced. Dr. Daser attributed this fortunate occurrence to the prick of the needle having excited the contractility of the intestine, causing it to contract on its contents, expel the gaseous matter into the abdominal portions of the gut, and thus facilitate its reduction.

Edinburgh Medical and Surgical Journal, Oct. 1841, *p.* 549.

95.—APPARATUS FOR OBLIQUE FRACTURES OF THE SHAFT OF THE FEMUR.

By M. Focachon.

The patient being placed in a horizontal posture, a bandage is applied from the toes to the groin. This done, two double

bands, half of each of which remains loose, are placed by the sides of the limb, and extend from within a short distance of the seat of fracture for about a yard downwards. These are intended to furnish the principal fixed point for the continued extension, which M. Petrequin, the inventor of this method, calls *permanent parallel extension.*

To fix them firmly in this position, they are starched, or covered with a layer of dextrine, and then rolled round with another bandage; and then another quantity of starch or dextrine is applied over the whole together. An assistant constantly keeping the limb in a horizontal position, and at the same time maintaining some extension of it, the other half of each of the bands, which was hitherto left loose, is now applied along either side of the limb, and arranged like the first, so as to go to the same distance beyond the foot as it does. Two fresh rollings of the bandage, and another layer of starch, serve to fix this band in just the same manner as the first. Six or eight very narrow and flexible splints, almost as long as the femur, are next applied over the fracture, and are kept in place by a bandage; and if necessary, a second layer of splints, and another bandage are added; and then the whole are well starched, to fix them all in one firm mass. Long rigid splints, with two pads, fix the limb laterally, as in the method commonly employed, till the solidification of the apparatus is completed; and two flexible splints are placed behind, and two in front of the thigh, in order that the compression may be made methodically and equally over every part of the limb. The leg, since it does not naturally lie in the same plane as the thigh, must be slightly raised by a little cushion, so as to bring it to the same level. The apparatus being thus disposed, and having dried, the constant extension of the limb is made by means of a weight, greater or less according to the circumstances of the case, which is fixed at the lower extremity of the two bands already described as passing from below the fracture to beyond the foot, and which are carried over a rod at the bed's foot, aud made to slide on it as on a pulley.

The advantages of this mode of extension are, that it acts over a considerable extent of the limb without fatiguing the patient; that it acts only on the lower portion of the fractured bone, and thus more effectually and more regularly; that it draws uniformly in the direction of the axis of the limb, and

parallel to the fractured bone; that it prevents shortening, and that the patient cannot escape from its influence by sliding down lower in bed.

Medical Gazette, Sept. 17, 1841, *p.* 991.

76.—HÆMORRHAGE AFTER LITHOTOMY STOPPED BY CREOSOTE.

By Dr. Daser.

In a case of lithotomy it was found impossible to arrest the hæmorrhage by any of the usual means, and no particular vessel could be discovered from which the blood might flow. The patient was at last reduced to the lowest ebb from the continued loss, and had already lost consciousness, when a sponge dipped in pure creosote was introduced into the wound, and pressed against the bleeding parts for an instant or two. The hæmorrhage was immediately arrested. No particular pain was experienced, no unpleasant symptoms followed: thin eschars were thrown off, and the patient recovered.

Edinburgh Medical and Surgical Journal, Oct. 1841, *p.* 549.

97.—ACTION OF HYDROCYANIC ACID, ETC., ON THE EYE,

By A. Turnbull, M.D.

It is a well-known fact that the eyes of those who have been destroyed by hydrocyanic acid for a length of time after death shew none of the usual symptoms of dimness. On the contrary, the eye is clear, and the pupil much dilated. This satisfied me that the acid exerted a specific action upon the eye, which might be made available as a medical agent for relieving many of the diseases to which that organ is so subject.

My first experiment was undertaken in 1837, with the diluted acid, by dipping a sponge into it, and rubbing it upon the forehead for the space of a few minutes, which gave the skin a very red appearance; but the patient experienced not the least sense of heat, and the pupil was slightly dilated. I continued to use this with very beneficial effects in incipient cataract, opacities of the cornea, inflammation, amaurosis, iritis, &c. Of late I

have substituted the vapour of the concentrated acid to the eye with much more decided effect, and without the slightest danger, The plan I generally adopt, is to put into an ounce-phial a drachm of the acid, and hold it in close contact with the eye, the eyelid being open, for the space of about half a minute, or until such time as the patient feels a little warmth, or the person holding the phial sees the pupil greatly dilated, and the vessels of the eye injected with blood, which is the invariable effect of the application of the acid. The patient is not sensible of pain from this peculiar state being induced, which appears to me to result from the powerfully sedative influence of the acid, thereby showing that two opposite powers—to wit, stimulating and sedative—are exerted at the same time; and thereby the uneasiness arising generally from a stimulant alone is prevented. Its great power in removing these diseases chiefly arises from the two powers being so blended, and thus enabling the eye to bear a sufficient stimulating action without injury. The person who holds the acid to the eye should be careful not to allow the patient to smell it.

The essential oil of bitter almonds I use for the same diseases. I put two drachms of water to two drachms of the oil, in an ounce-phial, and hold it in the same way to the eye as the acid; but its effects are not precisely alike. The feeling induced by the oil is soothing, and generally relieves all sense of pain, even of tic douloureux, without sensibly dilating the pupil, or causing much redness of the eye. I find it very useful in taking away the heat occasioned by the hydrocyanic acid.

Medical Gazette, Oct, 1, 1841, *p*. 49.

MIDWIFERY.

98.—NEW KIND OF PESSARY,

By Chas. Clay, Esq., Lecturer on Medical Jurisprudence, Manchester.

[The great advantage of a pessary of the kind described and recommended by Mr. Clay, would no doubt be as he says, to support the womb; and at the same time would not so distend the vagina as to render the evil of prolapsion even greater than ever, the moment the instrument is withdrawn. There can be no doubt that all the pessaries now in use, give relief at the expense of increasing the evil sought to be remedied, by producing even greater distention and consequent relaxation of the vaginal tissues: and this must always be the case so long as the large instruments (more like foot-balls as Mr. C. says,) continued to be required for the evils of prolapsion of the womb. These common pessaries may indeed support the womb, but cannot allow nature the opportunity of remedying the mischief, which Mr. Clay's pessary really promises to do. It is described as follows.]

It consists of a small shield of wood, ivory, &c. of a peculiar shape, secured to the vaginal entrance by bandages attached to a belt applied around the body. To the inner surface of the shield is fitted a strong coil of steel wire, plated over with gold or silver, the dimensions of the coil being such, that when worn the vaginal canal will not be in the least extended, but with every facility assume its original dimensions. At the end of the coil is a caoutchouc ring, a little larger in dimension than the coil on which the os uteri rests when applied.

It must be evident, on reflection, that this plan possesses infinite advantages over the old pessaries, particularly in the following points of consideration :— First, The elasticity of the

coil allows of the free motion of the body in every possible direction with perfect ease. Second, The vaginal canal not being obstructed, the catamenia can flow through the caoutchouc ring and along the coil without any hindrance. Third, The dimensions of the coil and ring being so moderate, no undue pressure can prevent discharges either from the bladder or rectum. Fourth, The laxity of the vaginal canal may be removed, and its original dimensions restored *(the measurements of the coil being not larger than the vaginal canal in a healthy condition.)* Fifth, Local applications for improving the tone of the parts are facilitated by the opening in front of the shield through which injections can be thrown and retained at pleasure, by introducing a small piece of sponge, or plug, into the opening; and the same plan might be a protective to females in heated or crowded rooms, for sudden appearances of the catamenia.

It must be borne in mind that the caoutchouc ring is some little larger than the coil, and the length of the coil must vary a little, according to circumstances: *when it is weighted with the uterine mass, it should be about the length of the vaginal canal in a healthy state.* I think a coil, varying from three and a half to four and a half inches will be found sufficient. To prevent any folds of the vaginal coats from getting entangled in the coil, a thin slip of caoutchouc is proposed to stretch along the under and outer surface of the coil.

Such is the instrument I wish to introduce. I have full confidence when manufactured by an able hand, that much good would result from its application. When the idea is made public, many hints perhaps may be given for its further improvement.

Lancet, Sept. 11, 1841, *p*, 862.

99.—POLYPUS OF THE UTERUS EXPELLED BY THE ACTION OF SECALE CORNUTUM.

By M. P. Moyle, Esq., Helston, Cornwall.

[Mr. Moyle was requested to attend without delay a Mrs. W., who had suddenly lost a large quantity of blood from the womb, and had just recovered from a long state of syncope. The

blood was lost in about two or three minutes. She had frequently had small hæmorrhages previously, and was becoming weaker in consequence. Her legs and thighs were swollen almost to bursting, her countenance pallid, respiration difficult, and general health decaying. After she had recovered greatly from her fainting, and after Mr. Moyle had satisfied himself that the flooding was owing to polypus of the uterus, he proceeded as follows:]

A fresh appearance of hæmorrhage induced me to give her at once two drachms of the tincture of secale cornutum, the valuable effects of which I had often before experienced. I also applied a bandage firmly round the abdomen, and applied cloths, wetted with cold vinegar and water, to the pudendum. The discharge proved to be little, and no faintness followed. In twenty minutes after the first dose, the tincture was repeated, and in a few minutes she complained of being griped. Suspecting this griping to be a slight contraction of the uterus, I ventured an examination by the vagina. The vagina was full of coagula; the os uteri was flabby and dilated to the size of half-a-crown piece, immediately within which I found a substance of somewhat firmer texture than the coagula, and around which my finger passed freely. During the examination there was a pain of sufficient force of the os uteri to embrace the finger firmly, and I now felt confident of being able to subdue the hæmorrhage for the present, and was not without hopes that I might, by a perseverance of the remedy, enable the uterus to throw off the extraneous substance within it. A third dose was now administered, which kept up the pains at short intervals, but they were weak and feeble. Finding this the case, the supposition was, that she was too much reduced from the disease and the recent loss of blood for the medicine to have its full effect. A cup of gruel, with a small quantity of brandy in it, was given her, and in a half an hour after, another similar potion, which had the effect of reviving her to a great degree. I now took my leave about eight o'clock P. M., giving directions for a repetition of the food, together with some beef-tea, at intervals of an hour or every second hour, leaving with her four doses of the secale, to be taken at intervals of half an hour; in case there should be the slightest appearance of flooding, I was to be sent for immediately.

Early on the following morning, I found her labouring under sharp contractile pains of the uterus, from having taken, two hours previously, two doses of the secale. Examination discovered the mass of polypus filling the vagina. The patient was very cheerful, and expressed herself convinced that the mass was coming away. The pains were by this time not so severe as they had been, and consequently I now gave her three drachms of the tincture in a little brandy. This had the effect, in about twenty minutes, of producing a severe pain, which brought the mass to the os externum. It was now grasped with the hand, and, on the recurrence of the pain, the whole was discharged. Slight hæmorrhage only followed the expulsion of the polypus, which equalled in size two large placentæ. From this moment she recovered with rapidity. There was a slight appearance of the menses at the end of six weeks, succeeded by a more abundant appearance at the termination of another similar period. She daily improved in health, the œdema gradually subsided, and although she was for many months unable to put the whole weight of her body on her right leg, yet from bandaging, the use of tonics, &c. she is now, in all respects, a perfectly healthy robust woman.

Lon. and Edin. Monthly Journal of Med. Science, June 1841, *p.* 417.

[The successful result of this case induced Mr. Moyle to try the use of the ergot in another patient who had previously been under his care. He visited her on the 7th Sept. 1839, and gave her four doses of the tincture of secale cornutum, ʒ ij. in each dose. Two or three slight pains were now experienced, nausea and vomiting followed. Shortly afterwards she had a severe labour pain. She then took ʒ iij. more of the tincture, and the pains increasing, the polypus mass was felt at the os uteri. By the further use of the medicine the substance was completely expelled. It was about the size of an average placenta.

The following case related by Dr. Somerville will corroborate the statements of Mr. Moyle.]

Mrs. G., aged 26, had been subject to femoral hernia of both sides for several years, and for some time previous to her marriage, up to the period of her first confinement, had suffered much from leucorrhœa. At the time of her delivery, she had an attack of uterine hæmorrhage, which subsequently returned

at intervals, and continued with considerable violence, till she called on me for advice, about fifteen months after her delivery. I did not, at that time, propose an examination, but prescribed a few doses of ergot in powder. The next day she complained of being severely pained, since she had taken the powder; and the discharge still continuing, I examined the state of the uterus, and found a mass slightly protruding through the os uteri, which I believed to be a polypus. The ergot was given in increased quantity and at shorter intervals, which produced severe bearing-down pains, and in a short time, a polypus about the size of a large orange, having a thick pedicle, and attached to the anterior surface of the cavity of the uterus, was propelled into the vagina. After an interval of a few days to permit the irritability of the uterus to subside, a ligature of silver wire was applied by means of a double canula, but it broke on being tightened. Another and stronger wire was applied, and after it had been firmly tightened, great pain and tenderness of the tumour, and also of the abdomen supervened. The abdominal tenderness was speedily relieved by antiphlogistic means, but the pain and uneasiness of the tumour still continued, in such a degree, as to require great gentleness and caution in tightening the ligature. The wire, however, gradually ulcerated through the portion to which it was applied. On its separation, the lower half of the pedicle of the tumour was found divided, while the upper half, which probably had been first separated, had become reunited, and a distinct sulcus was felt on its upper surface, where the reunion had taken place. The circumstance of the time required for tightening the ligature being considerably longer than usual, on account of the tendency to abdominal inflammation and the tenderness of the mass itself, will probably account for this unusual occurrence. The polypus became gradually smaller, and the pain in it having abated, another ligature was applied in the same site, which, in a very few days, effected a complete separation of the tumour, and it was removed by the fingers. On inspecting the polypus, the sulcus, where the second ligature had been applied, and reunion had taken place, was perceived extending all round the upper half of the pedicle. The uterus was examined by the speculum shortly after;—the os uteri was still open, and its lips swollen and tender, but these symptoms were speedily removed, and the woman is now in the enjoyment of excellent health.

Dr. M'Farlane, in his Essay on Polypus of the Uterus, in the Glasgow Medical Journal for 1828, mentions the following case, where the effect of the secale cornutum was equally decided, and the separation of the tumour was effected without the use of any other means, as in those of Mr. Moyle.

A lady, who had been subjected to profuse hæmorrhage for a period of ten months, had for several years been affected with habitual leucorrhœa. After various remedies had been employed without effect, an examination was made, and the uterus felt enlarged. Considering that the continued hæmorrhage might be owing to the presence of a polypus, or some other tumour within the uterine cavity, Dr. M'Farlane resolved to try the effect of the ergot of rye, as, from the character of the lady, and the history of the case, he had no reason to suspect pregnancy. After the administration of some doses of this medicine in infusion, severe pains were produced, which continued for several hours, when, on examination, a polypus was found in the vagina, having a slight pedicle, which in a few days ulcerated, and was easily extracted.

Ibid, August 1841, *p.* 570.

100.—CASE OF CÆSARIAN SECTION.

By James Whitehead, Esq.. Manchester.

[Although the following case of Cæsarian section was not successful in its results, yet we cannot help placing it before the reader, not only on account of the clearness with which the steps of this important operation are described, but also for the judicious mode of treatment adopted, if we except indeed the too continued use of opium throughout the case, in which we should in some measure disagree with the writer.

The subject of the operation was Mary Ann Jones, 39 years of age. Her first four labours were natural and easy, there being sufficient room in the pelvis to admit of the easy descent of the child; but during the whole of her fourth pregnancy she became affected with rheumatic pains in her limbs, back, and pelvis; the labour was nevertheless easy. During her next or

fifth pregnancy, she suffered severely from these pains and her stature became considerably diminished.

When labour came on at the full period, Mr. Clough found the antero posterior diameter was under two inches, and in a consultation of medical men, recommended the cæsarian operation; but in this opinion most of the others did not coincide. Embryotomy was had recourse to, and the woman was delivered with considerable difficulty, but recovered safely.

After this, she was pregnant several times, and premature labour was easily induced at the end of the fourth month each time. During her last and tenth pregnancy the attempts to bring on abortion were unsuccessful, although repeatedly and fully tried. She was therefore allowed to go to the full period of pregnancy.

Mr. Whitehead then relates the case as follows:]

I was summoned to attend her on the evening of the 14th of August, 1840, gestation being then at its full period. The pains were slight and lingering, and by the aid of an anodyne draught she passed the night comfortably. On the following morning the pains were still infrequent and trifling, but of a character indicating that labour was near. Four of my professional friends were consequently requested to meet me in consultation, at 12 o'clock. Two of them only could attend at that hour, and as the pains were scarcely more urgent than when she was visited in the morning, we agreed to meet at 7 o'clock in the evening. The patient had been in active labour two or three hours when we arrived. The pains were strong and frequent, and evidently occasioned great suffering. There had been no discharge except of mucus, so that the membranes in all probability remained entire. The frequent examinations which I had previously made of the pelvis had enabled me to ascertain with tolerable certainty to what extent the deformity had proceeded, and I now stated my opinion to be, that the greatest available space at the upper aperture of the pelvis, in its antero-posterior diameter, was not more than one inch and a quarter; in this opinion several who had also seen the patient with me before fully coincided. It was with great difficulty, however, that an efficient examination could be made, as the contraction in the cavity of the pelvis, and at its outlet precluded the introduction of the hand to a

sufficient extent. The tuberosities of the ischia were found to approach anteriorly to within a very short distance of each other, and the outlet was much encroached upon by the apex of the sacrum, which had advanced considerably towards the arch of the pubis. After each had again made a careful examination, we retired into another room for consultation. The conclusion was, that the dimensions of the pelvis were too small, not only for instrumental interference by the natural passages, but also for the fragments of the fœtal cranium to pass, had perforation and separation of the bones been practicable. The cæsarian section was therefore decided upon, and recommended to be performed without delay. I now returned to the room where the patient was lying, and informed her that it would be impossible to effect delivery in the usual way, and that the only means that could afford her or her child a chance of being saved was the cæsarian section, the nature of which I briefly explained to her. She consented without a moment's hesitation to submit to any operation that should be deemed necessary, and hoped it might be done as soon as possible.

Catheterism, and other necessary preliminaries, having been attended to, the patient was placed upon her back, her shoulders a little raised on pillows, and her knees flexed over the edge of the bed, when I placed myself, for the sake of convenience, in the kneeling posture. Two assistants were stationed near her shoulders to keep her still, and one on each side of her near to me, each holding a candle; another was prepared to supply whatever instruments, sponges, &c. might be needed. The external incision was made in the line of the uterine axis, commencing about four inches above, and extending nearly the same distance below the umbilicus, and running a little obliquely from within outwards: its upper extremity being half an inch, and its lower an inch and a half to the left side of the linea alba. A short incision was first made through the whole thickness of the abdominal parietes, which were extremely attenuated, and continued by means of a director and probe-pointed bistoury. The cut into the uterus corresponded in direction with the external one, and was about seven inches long. A small incision was first made with the scalpel, and continued with the probe-pointed bistoury, the fingers being used to direct it instead of the grooved probe. The placenta being attached at this part of the womb was immediately torn

through with the fingers, and the child and it extracted without the slightest difficulty. The uterus, the parietes of which, in its distended state, were not thicker than shoe leather immediately contracted to the size of a child's head, and its walls became about three-quarters of an inch in thickness. Some of the small intestines now protruded at the upper part of the wound, but were immediately replaced, and held in by Mr. Fawdington. The parts were then sponged, the external wound brought together, and secured by six interrupted sutures, adhesive plasters in long straps, and a broad circular bandage. The lower fifth of the wound was left uncovered by adhesive plasters, in order to allow any discharge to pass freely from the interior: a piece of spread lint and a fold of the bandage being all that was thought necessary at this part. The loss of blood amounted to about eight or ten ounces; it issued principally from the placenta while being torn through. There was very little discharge, indeed scarcely an oozing of blood from the divided edges, either of the abdominal parietes or the uterus.

The woman bore the operation almost without a murmur, and said she had not suffered more than she should have done from two or three ordinary labour pains. The child, who was alive and healthy, was extracted in less than two minutes after the first incision was made, and the whole operation completed, and the patient in bed, in twelve or fifteen minutes from the commencement. The pulse was not materially affected, and the patient was lively and talkative directly after being put to bed. A quarter of an hour after the operation, which was at 9 o'clock, P.M., three grains of solid opium were administered, and directed to be repeated every four, five, or six hours. She passed a comfortable night: slight uterine pains came on three or four hours after the operation, and she had some lochial discharge at the same time *per vias naturales*. There has been a little oozing from the lower part of the wound.

[For some time the case seemed to be going on favourably, but eventually ended fatally thirty-two days after the operation.]

On inspecting the body 13 hours after death, the upper part of the wound, three inches in length, had healed by granulation. A small knuckle, the size of a section of a hazel nut, of the intestinum ileum, had insinuated itself between the edges at this part, but did not protrude beyond; its surface was covered with

granulations. The rest of the wound was flabby; and the granulations, which appeared so luxuriant and healthy a week before, had become partially absorbed. A small cul de sac existed between the lower extremity of the cicatrix and the fundus uteri; this was in progress of being filled up by granulation. The incision into the uterus was at its fundus, and at this time one inch in length; both sides were studded with healthy granulations, a circumstance somewhat remarkable, considering the unhealthy appearance of the external wound. I believe that the wound in the womb had been healed, as previously mentioned in the notes of the 23rd day, but subsequently separated at the time when the reparative process ceased to go on externally, and that the adhesions were destroyed by absorption. The womb, which is in my possession, was scarcely larger than it is usually seen to be in its healthy unimpregnated state. The external wound, as well as that in the uterus, was excluded from the general peritoneal cavity by a most complete barricado, formed by adhesion of the parietal and visceral peritoneal surfaces, imperforate at every point, and situated at a distance of from half an inch to an inch from the edges of the external wound. These adhesions were perfect on the fourth day after the operation, and I think earlier. On carefully dissecting away the peritoneum from the fore part of the pelvis on its inner aspect, a gush of well-formed pus flowed out from the side of the right psoas muscle. The cavity containing this fluid was within the sheath of the psoas magnus, and was traced forwards to the body of the pubis, and thence downwards to the cavity of the hip-joint, which was filled with matter of the same kind. The ligamenta teres and transversum were almost entirely absorbed; and the head of the thigh-bone, and corresponding surface of the acetabulum, were denuded of cartilage, and quite carious. From the hip-joint the abscess had taken a course upwards, passing beneath the cotyloid ligament and periosteum, over the body of the pubis to its posterior aspect, the whole of which was also carious. The stomach, bowels, liver, and other abdominal viscera appeared healthy.

Medical Gazette, Sep. 10, 1841, *p.* 940—946

101.—CURIOUS CASE OF DROPSY OF THE AMNION.

By Jonathan Toogood, Esq., Senior Surgeon to the Bridgwater Infirmary.

[The following interesting case of this affection ought to put us on our guard in cases of apparent dropsy, as the expected relief in these latter cases by tapping would only greatly disappoint the surgeon, and endanger the life of the patient.]

On the 27th of May, 1830, I was requested to meet Mr. Davidson in consultation, at Mary Cawes', of Pawlett. She was between the sixth and seventh month of her pregnancy, and suffering from general dropsy to such a degree, that Mr. Davidson considered the only chance of affording relief was by tapping, which operation he was prepared to perform on my arrival. I satisfied myself of pregnancy, and although she was greatly swollen, and suffering much from dyspnœa, I could not sanction his proposal, and recommended diuretics and opiates. On the 30th, she was reported to be somewhat relieved, but the lower extremities had become more œdematous. On the 2nd of June, she was reported to be suffering so much from œdema, vomiting, diarrhœa, and most distressing dyspnœa, that her medical attendant represented it not only improper, but dangerous, to delay the operation any longer. I found her in a deplorable situation, the swelling had increased very much, she could keep nothing on her stomach, nor could she lie down for an instant; the pulse was weak and fluttering, the abdomen was distended to the utmost; the fluctuation could not only be distinctly felt, but absolutely seen, the parietes of the abdomen had become so thin. It was evident that immediate steps must be taken for her relief; and so satisfied was her adviser of the rapid increase of all her symptoms, and immediate danger, that he again proposed, and strongly urged, that a trocar should immediately be plunged into the abdomen. I could not recollect to have seen any account of such cases, which would have enabled me to have determined my practice with greater confidence. (Dr. Lee's paper had not been published at that time.) I proposed the induction of premature labour, and at four o'clock in the afternoon ruptured the membranes with a male catheter. Two hours after I felt the funis presenting, and left her in Mr. Davidson's care, from whom I learned on the following morning, (Thursday,) that she had been delivered of a small fœtus at 12 P.M.,

and that the abdomen had subsided a good deal. On the following day, (Friday,) I received a note from him, which I copy in his own words:—"I beg to inform you that the poor woman Cawes has been delivered of a second fœtus this morning, when I was called to her, and found her in hard labour, with the membranes very much distended, which I instantly punctured, when upwards of ten or twelve quarts of water were evacuated, succeeded, of course, by a complete subsidence of the abdomen. The issue shows the difficulty attending the diagnosis of such morbid appearances."

Provincial Medical and Surgical Journal, May 22nd, 1841, *p.* 149.

[When we read the above case we must receive with due caution the advice of even Dr. Burns, who says, speaking of ascites during pregnancy, "If in spite of treatment the swelling increases, paracentesis must be performed, and I am surprised, that there ever should have been a moment's doubt as to its propriety, for there certainly can be none as to its safety." In Mr. Toogood's case, Dr. Burns' practice would have been highly dangerous, and probably fatal: and yet it was most difficult to know whether the water was in the womb, or in the peritoneal cavity.]

102.—ON THE IMMERSION OF CHILDREN APPARENTLY STILL-BORN, IN COLD WATER.

By Dr. Scholer, Assistant Physician of the Berlin Lying-in-Institution.

This paper contains two well-detailed cases, and alludes to several others, in which this measure was successfully adopted, after all the ordinary means had failed of reanimating the infant. The evidence adduced is certainly sufficient to warrant the adoption of the plan as a last resource after less violent measures have been tried in vain.

Medicinische Zeitung, April 28, 1841; *and British and Foreign Medical Review, Oct.* 1841, *p.* 560.

[This fact may seem contrary to the general opinion, but we are warranted in saying that the cooler a child is kept immediately after birth when apparently still born, and the longer it will bear the state of asphyxia. So long as the heart beats the

child will do without breathing longer when cold or cool, about? degrees, than when kept warm or hot. Hence we perceive that the new-born child which is generally two or three degrees colder than the mother, and colder than it very soon becomes, is better able on that account to live for a time without respiration.]

103.—ON CONGENITAL ASPHYXIA.

By Dr. Marshall Hall, F.R.S.

[In his late work on the diseases and derangements of the nervous system, Dr. Marshall Hall makes the following remarks.]

The infant is said to be *still-born.* We wait for the establishment of respiration, and this event does not take place. There is a general alarm. We now see the value and importance, in a *practical* point of view, of the principles of the physiology and pathology of the nervous system which I have been detailing. I have stated that respiration is an *excited* function; that it belongs to the excitomotory sub-division.

In one word, then, all our efforts must be instantly made to *excite* respiration. Now what are the channels through which this act may be excited? What are the excitors of respiration? The *trificial,* the *pneumogastric,* and the *spinal* nerves.

The trifacial nerves must be excited by *forciblg* blowing or dashing cold water on the face, by stimulating the nostrils by ammonia, snuff, peper, or the point of a needle.

The spinal nerves must be excited by *forcibly* dashing cold water on the thorax, the thighs; by tickling or stimulating the sides, the soles of the feet, the verge of the anus.

What the pneumogastric is, as the excitory nerve of respiration, under ordinary circumstances, the trifacial and the spinal nerves are, in cases of asphyxia, or suspended respiration. The means recommended for exciting respiration through these excitors, frequently induce a sudden act of inspiration, which proves the first of a series, so essential to animal life.

The important point to be mentioned, is, that it is not the mere application of cold, but the *sudden* application of *cold* to a *warm* surface, which is the effectual means of exciting respiration. It is the *sudden alternation.* To apply cold to a cold

surface would only be to sink the general powers of life. The infant should be kept warm; the warm bath may be required; and then cold water must be applied, in moderate quantity, but with force.

But if these attempts to *excite* respiration through the trifacial and spinal nerves fail, we must *imitate* this function, by artificially distending the lungs, in the hope that, eventually, it may be excited through its wonted channel, the pneumogastric.

To effect this, the practitioner's lips are to be applied to those of the infant, interposing a fold of linen, and he is to propel the air from his own chest, slowly and gradually, into that of the infant, closing its nostrils, and gently pressing the trachea on the œsophagus. The chest is then to be pressed, to induce a full expiration, and allowed to expand, so as, if possible to effect a degree of inspiration.

But it is important, in doing this, that the practitioner himself should previously make *several deep* and rapid respirations, and finally, a full inspiration. In this manner, the air expelled from his lungs into those of the little patient, will contain more oxygen and less carbonic acid, and consequently be more capable of exciting the dying embers of life.

I base this suggestion on an interesting communication by Dr. Faraday, in the London and Edinburgh Philosophical Magazine, vol. iii. p. 241, for October, 1833, to which I have already referred. It is ascertained that respiration may be suspended longer, as in diving, or in experiments, after such repeated forced respirations, than in ordinary circumstances, from the greater purity of the air in the lungs.

If all these plans should be tried in vain, I would strongly advise galvanic or electric shocks, to be passed from the side of the neck to the pit of the stomach, or in the course of any of the motor respiratory nerves, and their appropriate muscles. No time should be lost in sending for a proper apparatus; but, should the lapse of an hour, or even more, take place before it *can* be obtained, still it should be sent for and tried.

When respiration is established, the *face* must *still* be freely exposed to the air, whilst the temperature of the limbs and body is carefully sustained.

In the *midst* of these efforts, it should, in the next place, be the office of two other individuals to maintain or restore the

temperature of the little infant, by gently but constantly pressing and rubbing its limbs between their warm hands, passing them upwards, in the direction of the venous circulation.

An enema of gruel, at 90° or 100°, or *higher*, with a little brandy, should be administered.

As soon as possible, a little warm liquid, as barley-water, at blood-heat, should be given by means of the proper bottle, furnished with leather or soft parchment. A tea-spoon must not be used for fear of choking. If the infant draws the liquid through its own lips, by its own efforts, there is no danger.

Lastly, these various means should be continued or repeated in the most persevering manner."

Medico-Chirurgical Review, Oct. 1841, *p.* 319.

[It will be noticed in this paper that Dr. Hall disagrees in some measure with Dr. Edwards, of Paris, and Dr. Scholer, of Berlin, with respect to keeping the surface warm or cold in a state of asphyxia. No doubt Dr. Hall's opinion is of the greatest weight in such a matter, but still we think upon the whole that facts go decidedly to prove, that a moderate temperature, that is about 60 degrees, is much to be preferred to one of 90 or 100 degrees.]

104.—USE OF THE TOURNIQUET TO RESTRAIN HÆMORRHAGE AFTER DELIVERY.

By Wm. Pretty, Esq., M.R.C.S.

[The late Mr. Walford, teacher of midwifery in Aldersgate street School, was the gentleman who first suggested to Mr. Pretty pressure by means of the tourniquet to check those fearful hæmorrhages, which so often follow the birth of the child, and separation of the placenta.]

Mr. Walford recommended the tourniquet to be made at least double the size of the one in ordinary use, with a proportionably wide band, and this must have obvious advantages over a smaller one. The one I have hitherto used has been taken from an amputating case. I removed the pad, and by increasing the length of the fellet sufficiently to encircle the hips, with this and the compress I have obtained a power far exceeding

any hitherto obtained by other means. I am disposed to think the most eligible compress might be made of a piece of cork, about an inch in thickness, covered with soft leather, and shaped somewhat to the inferior and anterior aspect of the abdomen; this would be sufficiently firm to yield uniform pressure over the uterus without giving any pain, which I have found the corners of a book apt to do: or something softer might be applied first upon the body if thought desirable. Twice I have tried the tourniquet on the same patient in flooding labours, with satisfactory results. The first time I attended this patient, which was of her fourth child, she flooded dreadfully, and so perilous was her condition that I did not think it possible she could recover. The debility, as usual in such a case, was long and continued, and so debilitating to the poor mother, that to nurse the child was out of the question. When called upon to assist at her next confinement, I was prepared with a tourniquet, and tr. secale cornut. She began to loose blood very freely after the birth of the child, the placenta being detached and lying in the vagina. I gave immediately a dose of the secale cornutum, and applied the tourniquet, shortly after which I gently removed the placenta, and all further hæmorrhage was quickly restrained by increasing the pressure; fainting did not ensue, and I was relieved of all that bodily exertion which had been so fatiguing to me upon the former occasion.

At her subsequent labour I had to encounter the same danger of flooding, which commenced as before, and which, by the use of the tourniquet and compress *alone*, was most satisfactorily suppressed. This labour was of twelve hours' duration, and the latter pains were very severe: its progress was regular, the head of the child gradually advanced, and after its extrusion, several pains were required to bring the shoulders, body, and hips, into the world. The placenta was found loose in the vagina. All this was very favourable for the non-supervention of flooding, but it did appear; and at this time I removed the placenta, which gave a momentary facility to the free discharge of blood, before I turned the screw of the tourniquet, and quickly stopped all further flow. The patient has made a much better nurse, and has been altogether stronger and better after this confinement than any former one, except her first, which occurred in the country about twelve years since. Sleep soon followed the delivery, and I left my patient with a soft compress

and the tourniquet upon the body for two hours, when I returned and saw her placed comfortably in bed. She had not one bad symptom, nor yet an after pain, neither did I give one drop of laudanum.

[In another part of this interesting paper of Mr. Pretty's, he mentions a singular case of expulsion of the womb and its contents entire. He says:]

I feel some desire to state, that early in my professional practice I met with rather an extraordinary occurrence, viz. the expulsion during the last pains of labour of the whole of the uterus entire—the child, placenta, and membranes, unbroken upon the bed. At first I was a little astonished, but the momentary surprise yielded to my doing something towards saving the life of the child; I therefore immediately ruptured the membranes, discharged the liquor amnii, and separated the infant, which soon began to cry, and both it and the mother did well. I had been in the house only a very short time before I was summoned to give this assistance. The labour was quick, and took place at the full period of utero-gestation. The mother had borne one child only before, which was then twelve years old.

[Mr. Pretty finishes his paper, by giving an account of rather a new midwifery instrument, the whalebone vectis, as follows:]

In the month of October last year, I had the pleasure to see the very good effects of a new midwifery instrument (the whalebone vectis), in the hands of Dr. Conquest, in a case of protracted labour under the care of a lamented friend. A woman, ætat. 35, strong and healthy, in labour of her first child, went on favourably for some hours; the head presented, and the os uteri became fully dilated; but notwithstanding the pains were frequent and forcible for several succeeding hours, the labour made no progress; and as various means had been tried, such as bleeding, secale cornutum, purgatives, and salines, and I think a dose of laudanum, without any increased probability of it being soon brought to a termination, it was decided in consultation that the patient should be delivered by the aid of instruments. The os uteri, I have stated, was fully dilated, the ear could be felt above the brim of the pelvis and to one side of the symphysis pubis; the forehead was the presenting part, with the face towards the pubes; not much of the head had entered the superior aperture of the pelvis, and in the absence of pains the

finger could readily be passed round it; and the vagina was so dilatable that a small hand was easily passed within it. Dr. Conquest considered the situation of the head too high up for the safe or favourable employment of the forceps, and that in all probability we should be obliged to resort to the operation of cephalatomia.

Dr. Conquest exhibited to us the whalebone vectis, which he said was the invention of a gentleman whose name I do not remember, but the maker's name is Maw, of Aldersgate Street. He strongly recommended it as a safe and useful instrument, capable of affording all the aid to be obtained by the forceps without increasing the danger. It is formed of a thin loop of whalebone affixed to a handle. This instrument was passed over the occiput with the greatest facility by Dr. Conquest, and traction was made by him and myself alternately during the presence of pains. After a few efforts the head descended a little; by persevering in the traction it was brought without the os externum, in half an hour from the time instrumental assistance commenced. Dr. Conquest had some reason to expect that, as the occiput was brought down, the face might ascend, but this did not happen: the instrument being applied to that part of the occiput adjoining the vertebræ, traction brought down the head as it presented, face and forehead first. The child was dead, as was expected, no motion having been perceptible for many hours, and the patient had been thirty in labour. The placenta was adherent to the uterus, and required manual assistance for its removal. The recovery of the patient was perfect and uninterrupted. I was much pleased to see the delivery effected so easily and by such simple means, and I cannot do otherwise than join Dr. Conquest in recommending this very valuable instrument to those of the profession who may not have seen or heard of it.

Medical Gazette, June 25, 1841, *p.* 540.

105.—THE USE OF THE ACTUAL CAUTERY IN PROCIDENTIA UTERI.

By J. Adair Lawrie, M.D., Surgeon, Glasgow Royal Infirmary.

[The following is an interesting case, showing the efficacy of this valuable remedy in procidentia uteri. Christian M'Lean,

æt. 18, a servant, while carrying a heavy tub, felt something give way in the pelvis, and as if the vagina immediately afterwards was unusually distended. Some days after this, the uterus distended the vagina, and rapiply descended so as completely to prolapse. It could easily be returned by pressure, but again descended almost immediately. She derived no benefit from the free application of the nitrate of silver, astringent injections, pessaries, bandages, and the ordinary treatment. Strips of the mucous membrane of the vagina were dissected off from the lateral and posterior parts of the vagina, without any benefit.]

On the 2d of October, the uterus being returned, Weiss's three-pronged speculum was introduced and dilated, and the actual cautery freely applied to both lateral surfaces of the vagina, nearly as high as the uterus. The operation gave considerable pain, and was followed by œdema of the external parts, retention of urine, some pain of abdomen, and hysterical symptoms, which readily yielded to mild treatment. She was kept in the recumbent posture till the 13th of November, and in hospital till the 8th of December. On the latter date the following report was entered in the journal. "Not the slightest tendency to renewal of the procidentia; she has no feeling of prolapsus. Uterus felt nearly in its natural position, with a circular contraction of the vagina a little below os uteri. The contraction firm, but quite elastic."

July 18, 1841.—She returned to the hospital, and the following report was taken. "Continued to do well till ten days ago, when, after having been employed for two days in the standing posture, used unwonted exertion, and afterwards taken a long walk, the prolapsus returned, and is gradually increasing; but the external tumour is not yet nearly as large as when she was first admitted."

July 25th.—The actual cautery was applied in the same manner as formerly, and was followed by the same train of symptoms, which readily subsided under one bleeding, aperients, fomentations, &c. She was confined to the recumbent posture till the middle of April, when she was allowed to walk, with a T bandage, and a compress on the perinæum. On the 25th of that month she was dismissed cured. I have heard of her within these few days. She remains free from prolapsus, or any tendency towards it.

Remarks.—I am not aware that the actual cautery is in common use, in this country, as a cure for procidentia. The above case appears to me worthy of being recorded, as showing that it will succeed in extreme cases, after the failure of the more common operation with the knife. In future I should prefer the cautery, as being rapid and easy of application, and so far as two applications can prove, not followed by any bad consequences, and successful.

Medical Gazette, Aug. 6, 1841, *p.* 758.

106.—ACCIDENTAL RUPTURE OF THE UTERUS AND ESCAPE OF A FŒTUS INTO THE ABDOMEN.

By Henry K. Randell, Esq.. M.R.C.S.

[Mr. Randell relates the following case, which needs no comment.]

Mrs. ——, of this village (Acle), ætatis 35, of pale aspect, but plump appearance, sent for me in the evening of the 3rd of April, 1841, in consequence of her having been attacked during the day with pain in the lower add fore-part of the abdomen, recurring at intervals of about a quarter of an hour. She stated that she believed herself to be about five months advanced in pregnancy, and had felt the motions of the fœtus about three weeks previously. She had passed water repeatedly since the commencement of pain, but there had been no escape of any other fluid from the vagina. The pulse was 92; tongue a little white, and she was thirsty. The bowels had not been relieved for three days, and she was naturally very costive. Whilst sitting by her bed-side she experienced a recurrence of pain; and placing my hand upon the abdomen, I felt immediately a decided uterine contraction.

There was a good deal of tenderness generally about the whole abdominal surface, which she said she had felt for some time. I remarked to her also the extreme enlargement of it for a person no further advanced in pregnancy than she had stated herself to be; and in reply she observed, that she was not exactly certain, for she had been taken very unwell about six weeks previously, and had been once slightly so since that period, and that ever since she had felt altogether very strangely at times.

She was certain, however, she had not felt the child until within the last three weeks, and then but very faintly. Considering it probable that premature labour was about to commence, I merely ordered her to keep quiet in bed, and to take an ounce of castor oil immediately; and if it did not relieve the bowels by the morning, to repeat the dose, and likewise to foment the abdomen by warm moist flannels, and to acquaint me in the event of a recurrence of pain.

[The patient continued after this in a variable state of health. On the 10th she was suddenly seized with hæmorrhage from the uterus, accompanied with occasional small grinding pains, which eventually ceased. The case is then continued as follows:]

She continued in this way, without any material alteration in her feelings, until the 20th, with the exception of all loss of feeling respecting the fœtus, since the last attack of hæmorrhage, and that the abdomen appeared to be more relaxed and flabby. The fœtus, too, which, if possible, was to be more distinctly felt than ever, she remarked, appeared to settle or gravitate to the most depending part, according to whichever side she rested upon; although its principal situation was still on the right side of the umbilicus, and a little above it. On the morning of this day, however (20th,) she had been attacked with small grinding pains, and had passed a few coagula, mixed with what appeared to be portions of deciduous membrane. I therefore made an examination per vaginam, and for the first time felt the os tincæ relaxed and dilated to the extent of a crown-piece, and its mouth occupied by a coagulum. On removing this, and introducing the index within its cavity, I felt, although scarcely within touch, something like the head of a fœtus. I therefore directed her to keep very quiet, to take only broth and gruel alternately, in order to support her strength, and to acquaint me as soon as the pains began to increase. I heard no more from her till six in the evening, when, on my return from visiting my other patients, I found they had twice sent for me.

On examination at this time I found the os uteri two-thirds dilated, the fœtal head presenting, and just dipping below the superior margin of the pelvis, and that there had been a constant draining of arterial coloured blood during the day. The pulse however was good, she had taken a good deal of nourishment, and had not once complained of feeling faint. As the

pains appeared tolerably efficient, I suffered her to go on without rendering her any more than the ordinary assistance; but after waiting three-quarters of an hour, finding the head made no progress, and that the pains also began to flag, I gently introduced the vectis, and speedily extracted the fœtus, which appeared to have attained the age of seven months. But little contraction of the uterus followed, although I gave her (as is my usual custom) 35 drops of laudanum, and half an ounce of brandy, in a wine glassful of cold or tepid water, and made use of pressure and friction with my hand on the abdomen for twenty minutes or longer. On doing so, however, I still felt the fœtus in the abdomen as plainly as ever, only that it now appeared to have sunk a little lower down; and thinking it just possible that the parietes of the uterus might be extraordinarily thin in this case, as to deceive me as to its being extra-uterine (although I believe I could still plainly distinguish the uterns by itself in the hypogastric region, only more contracted than before), I determined, as there were no urgent symptoms, to wait a little previous to my attempting to extract the placenta, as is usual with me at the expiration of this portion of time from delivery. No flooding or any other untoward symptom succeeding, I waited for an hour and three-quarters, when, for the first time since the birth of the fœtus, she suffered a slight pain; this was soon followed by others, and by gentle flooding. I immediately introduced my fingers as high as I could reach, and left nothing but the placenta. I then gently introduced the left hand into the uterus, and still no fœtus was to be felt.

Having satisfied myself, therefore, that the other child was not in the cavity of the uterus, I proceeded at once to extract the placenta, which I found partially adherent to the fundus uteri; and on separating it carefully with my nails throughout its whole extent, I found a portion of it elongated, and stretched toward the upper and back part of the left side of the uterus. On tracing this elongated portion very carefully, I found that it perforated the uterus at this part, by means of what appeared to my touch a somewhat narrow irregularly oval sort of opening, the edges of which felt contracted and tense, and which was barely sufficient to admit the index more than half-way, and beyond which I could feel nothing but what I imagined to be softened placenta. I therefore detached this elongated portion of placenta, which readily gave way on slight stretching, and

removed the whole. The contraction of the uterus followed the immediate withdrawal of the hand, and consequently there was no further hæmorrhage.

I immediately placed my hand upon the naked abdomen, and could now distinctly feel the empty and contracted uterus; the fœtus before mentioned in nearly the same situation; and above the situation of the iliac fossa in the left side, another substance which gave the idea, from its irregularity, &c. of another fœtus, but this, of course, was doubtful, as I could not clearly define it. The case, however, was now perfectly clear to my own mind, viz. that she had sustained, by some means or other, a rupture of the uterus, and that the fœtus or fœtuses had escaped from the uterus into the abdominal cavity, whilst one, and most likely that which happened to be most inferiorly situated, had remained. Or it might be that the retained one had pursued its proper course, whilst the other or others had escaped from the fallopian tube at the first into the abdomen, if at least such a case be possible. Upon inqury, however, subsequently, I learnt that about six weeks prior to this period, she was one day in the act of pumping from a pump, the handle of which was suspended higher than usual, and that consequently she had been obliged to use considerable exertion in order to raise the water; and, whilst doing so, she experienced a very strange sensation in her abdomen, accompanied with fainting, which obliged her instantly to come in and lie down on her bed. Very soon after she was taken unwell, with a good deal of pain and soreness, and that these symptoms continued with very little variation for nearly a week, and obliged her, from the excessive feeling of weakness they induced, to keep her bed nearly all that time. After keeping perfectly still, however, for the period I have mentioned, and taking a little castor oil occasionally, she began to mend, although she had not felt so strong ever since as she had done before, and found herself incapable of the least exertion. Such was the account she gave me.

Having gently supported the abdomen with a broad bandage, I directed her to be placed in bed, and the most perfect quietude enjoined. At the end of an hour I again visited her, and found her as comfortable as could be expected. No flooding had supervened, there had been but very slight pain, and she seemed disposed to be affected by the opiate. I therefore left her

for the night, desiring I might immediately be sent for if any change are in the symptoms.

21st.—I visted her at half-past six, and fonnd she had slept only half an hour. She had felt but very little pain, but complained of very great exhaustion, and cold clammy perspirations. Pulse 132, and feeble: no hæmorrhage, however, but a very copious discharge of highly offensive watery fluid. There was but very little tenderness of the abdomen, and, on examination, the uterus could be felt firmly contracted, just above the pubes, and the two other fœtuses as plainly as before. No urine had been passed.

I ordered her to take a fourth part of the following mixture every four hours.

Ammon. Subc. ʒ ij.; Tinct. Cinch. Co., Tinct. Hyoscy. aa. ʒ ij.; Mist. Camph. ℥ vj. ft. mist.

At the end of a week from delivery I again carefully examined the abdomen externally, and now as plainly as ever felt the fœtus in the hypogastric region; the presence of a second fœtus was, however, no longer clearly to be detected. The lochial discharge, though irregular, still continued, but was less fœtid, and the general health was rapidly improving.

May 27th.—From the last date to the present period she has been progressively improving and gaining strength.

August 7th.—Up to the present period she has continued as well as might be expected. She still retains a more than usually blanched countenance, and is incapable of much exertion, although she walks out a short distance whenever the state of the weather and roads permit. The catamenia have returned, and are regular.

Medical Gazette, Oct. 1, 1841, *p.* 45—49.

107.—SUPPOSED MENSTRUATION DURING GESTATION, AND AMENORRHŒA IN THE INTERVALS.

Dr. Meurer, has recorded an example of this in a woman ætat. 27, pregnant, when he wrote, for the fourth time. She always has had her menses regularly during pregnancy, and only during that time. They come on without any illness; and she has always borne healthy children at the full period. While

unmarried, and except during pregnancy, she never menstruated, but she was never unwell from it. Her general appearance is rather masculine; it appears, therefore, that in her, as in all viragos, the sexual functions require a powerful excitant, such as pregnancy, to cause them to be energetically performed. The menstruation appearing in such a person during pregnancy may be regarded as a wise effort of nature to relieve the local fulness of the sexual organs, which might prove injurious.

Medical Gazette, Nov. 1840, *and American Journal of Medical Sciences, April* 1841, *p.* 494.

108.—ABSENCE OF THE UTERUS.

By E. P. Bennett, M.D., of Danbury, Connecticut.

In December, 1833, I was called upon to prescribe for Miss ——, a young lady of about 18 years of age, for retention of the catamenia. She had suffered regularly every month, for the last two years, the usual symptoms of indisposition attendant upon menstruation. She was well formed, of good stature, with well developed breasts. I prescribed for a length of time the usual remedies in such cases, but contrary to my expectations, without the least benefit. Her general health was improved, but the menses did not appear. The obstinacy of the case led me to suspect organic obstruction. I mentioned this to her friends, and proposed an examination, to which she finally consented. The external organs of generation were perfectly developed in every respect, and perfectly natural. Upon introducing my finger into the vagina, I found that this canal terminated in a cul-de-sac, at the distance of two inches from the os externum. It did not appear like a membrane stretched across this canal, but like a complete obliteration of it. There was no indication of any accumulation of menstrual fluid behind it, although there was a slight enlargement of the abdomen. I introduced a common lancet into this substance the length of the blade, but it penetrated into no cavity; the hæmorrhage was considerable, and as I had had no experience in such cases, I desisted from doing any thing more. Soon after this my patient married, and I lost sight of her for several years. In August 1840, she again applied to me for relief. She stated

that she had enjoyed poor health generally, but occasionally she had had *monthly periodical discharges of blood per anum*, which relieved her, but of late they had entirely ceased. I examined her again, and found her in exactly the same condition as before marriage, only the finger could be introduced a little farther by carrying the obstruction before it. I then introduced a finger into the rectum, and a silver catheter into the bladder, and searched for a uterus, but could detect nothing of the kind, my finger coming in contact with the catheter, as in the male subject. In consequence of the discharges from the rectum, I thought there might possibly be a communication between the uterus and rectum, but I could detect none. I accordingly concluded that the uterus did not exist, and that the development of the external organs and breasts, and the pesence of venereal desires were produced by the ovaries alone. I stated to her and her husband my views of her situation, explaining the dangers, difficulties, and the uncertainty of an operation, and dissuaded her from having any thing done. In a few days her husband called upon me, and said that she was resolved vpon an operation, be the consequences what they might. In compliance with her earnest desire, but contrary to my own judgment, I proceeeded to operate, assisted by my kind and judicious friend, Dr. A. L. Williams, of Brookfield. I placed her upon the edge of a bed, with her feet upon two chairs, her knees supported by assistants. I then introduced a silver speculum of three-fourths of an inch diameter with some difficulty, (as the vagina was quite narrow,) then with the aid of a strong light I proceeded to make an incision with a scalpel, which I had previously prepared, by making a cutting edge upon the end. The substance was very dense and firm, and required considerable force to push the knife onward, which I did in a very cautious manner, until I had made an incision large enough to admit the point of the index finger; then with a finger in the incision and one in the rectum, I examined to see where I was. I then withdrew my finger from the rectum, and by moving the catheter in the bladder, found that as yet I was going correctly. In this way, by cutting, tearing, dilating, and examining, I proceeded on until I had penetrated about three inches into this substance, when the knife appeared to enter a cavity. I suspected at once that I had entered the cavity of the abdomen, but upon introducing a male silver catheter, straightened for

the purpose, I found that it it stopped abruptly after entering about six or seven inches from the external orifice. Considerable hæmorrhage followed, and she complained of severe pain in the bowels and loins. I introduced my finger, which passed readily up the whole length, but could detect no uterus. I introduced a gum elastic tube, the size of the ring-finger, six or seven inches, put her to bed, and gave a pill of opium and calomel. She wore this tube for six weeks, during which time it was taken out several times, and an endeavour to introduce a larger one made, but this was impossible. So great was the tendency to contraction, that if the tube was left out for two or three hours, it was very difficult to introduce it again. She suffered much from pain and inflammation in the bowels, having several attacks, which were relieved by venesection, calomel and opium. At the end of six weeks she discontinued the tube, and the incision soon closed, so that she is now in the same condition as before the operation.

American Journal of the Medical Sciences, April, 1841, *p.* 348.

109.—ON THE ADVANTAGE OF KEEPING THE UMBLICAL CORD WHOLE FOR SOME SHORT TIME AFTER BIRTH.

By M. Baudelocque.

In all cases where the infant is born weakly or in a state of asphyxia, M. Baudelocque recommends not to cut the umbilical cord, for some time at least after birth. He relates that since he has followed the opinions of Smellie, Levert, Chaussier, &c. on this subject, he has not lost a single case, although when born the child might be in a state of pretty complete asphyxia or apoplexy. He states that, though a child be born in an apopletic or asphyxiated state, the circulation still continues through the umbilical vein, even though the umbilical arteries should have ceased to beat, and that premature section of the umbilical cord takes away one of the chief aids to its revival.

Edinburgh Medical and Surgical Journal, Oct., 1841, *p.* 546.

110.—PARTURITION WITHOUT CONSCIOUSNESS.

By T. E. Rawson, Esq., Kegworth, Leicestershire.

[The following case is interesting in a medico-legal point of view, and ought to be known by every practitioner, especially as the opinions of most eminent accoucheurs are of a contrary nature. Mr. Rawson was called to this case immediately on the waters being discharged. No pain was present, and she was asleep on his arrival.]

On examination I found the os uteri dilated, and the head presenting. The child was slowly and *unintermittingly*, but forcibly, expelled. She betrayed no symptoms of uneasiness whatever, and though I watched her countenance, she did not exhibit the least consciousness of the child's expulsion, but expressed her surprise on seeing it. The child was strong and lively, and, with the mother, did well. The mother was about two-and-twenty, short, plethoric, and *healthy*. She was strictly respectable, and had been married full ten months; indeed, she could have no motive whatever for disguising her feelings.

I conceive the above case is interesting in a medico-legal point of view. Dr. Montgomery doubts the possibility of such an occurrence, "excepting under peculiar circumstances, *certainly not in a first delivery*."— (Dr. M.'s "Exposition of the Signs and Symptoms of Pregnancy.") In Beck's "Medical Jurisprudence" it is said that "the possibility of a woman being delivered without being conscious of it is disbelieved, *excepting some extraordinary and striking cause intervene*." But if such a circumstance *can happen* with a *first child*, it must have its full weight in cases of infanticide.

Lancet Nov. 27, 1841, *p.* 294.

ANATOMY, PHYSIOLOGY, AND PATHOLOGY.

III.—ON THE SIGNIFICATION AND ENDS OF THE PORTAL CIRCULATION.

By R. Willis, M.D.

[It has seldom if ever been asked why is there such a singular departure in the circulation of the liver from the ordinary mode of the circulation in general. The carbon from the lungs the bile from the liver, and azote from the kidneys, in the form of urea, must all necessarily be eliminated from the blood in order to preserve it in its purity; and they are all products from the wonderful laboratory which nature has established in the living system: and there is no sufficient reason for supposing that the blood from the intestines contains more of the elements of bile than that from other sources. It moreover happens that occasionally the portal system is found absent and yet bile has continued to be secreted. This is a positive proof that the portal system is not absolutely necessary for the elimination of bile.]

When we look beyond the two higher classes in the animal kingdom, mammalia and birds, we find an important extension of the plan of circulation, which, among them, we see limited to the liver; reptiles and fishes have actually a *portal system of the kidneys*, as well as a portal system of the liver. If fishes, the veins which return the blood from the tail, and frequently some of the internal abdominal organs, such as the ovaries, or testes, and the swimming bladde, unite into a trunk, or trunks, which, instead of falling into the abdominal cava, proceed to the kidneys, and there undergo distribution, from stems to branches and capillaries, precisely as the vena portæ is distri-

buted to the liver in quadrupeds and man. In reptiles there is also a renal as well as a hepatic portal system, the veins which are ramified through the kidneys in this class collecting their blood from the tail, hinder extremities, and abdominal parietes. It was even supposed by Jacobson of Copenhagen, who first called attention to the peculiar distribution of the veins to the kidneys which has just been indicated, that the same thing existed in birds; but this was an error; there is no renal portal system in birds, although there is an evident approximation to it; for the vessels which return the blood from the tail, legs, &c. of birds, form two large trunks which pass over the kidneys and receive contributions from them in their course to join the portal system. And this, by the way, is another argument in favour of the view that it is of no moment whence the blood is derived which feeds the liver; had the blood, which comes from the legs and tails of birds, not been fitted to yield the elements of bile to the peculiar elective force of the liver, it would not have gone to be subjected to the action of that organ. What then is the reason of the portal system, whether of the liver or of the kidney, among animals? It appears to me obvious. *It is a contrivance—a most desirable contrivance—to economise arterial blood.*

Of all the matters which are evolved in the course of the vital acts by which the body is maintained in its integrity, and by which its various wonderful attributes are manifested, no one appears to be so decidedly a poison as the carbon. It is on this account that the entire mass of the circulating fluid is sent, in all the higher animals, through a special apparatus, in which the free, or superfluous carbon is literally burned out, before the blood is fitted for re-distribution to the system at large. Urea and bile, other products of the chemistry of the living body, are not so deleterious as carbon; had they been so, the whole mass of circulating fluid must have been sent through the kidneys and the liver just as it is through the lungs. Only a part of the blood requires to be subjected to the action of these organs in order to be maintained in sufficient purity for even the most important ends in the economy.

In the higher classes of animals, the kidneys are not of such magnitude, but that they can be fed with arterial blood without detriment to the rest of the body,—the quantity that must be subjected to their action, in order that the amount of urea, salts,

&c., mingled with the general circulating mass, may be kept within due bounds, is not more than can be afforded. But the supply of so large a viscus as the liver with arterial blood, for a purpose which, however important in itself, is still only secondary, would have been a serious matter, and would have implied an increase of the pulmonary system especially, to an extent that must have been felt as inconvenient. Had the liver been furnished with arterial blood, as the means of affording bile, it must obviously have had a vessel sent to it of a calibre equal to the sum of the vessels whose contents are finally collected into the portal vein. Nature goes to work more economically; she first uses the blood of the great abdominal arteries to vitalise the viscera, and then gathering this into a common trunk, she sends it to minister to the function of the liver,—this blood as a vivifying fluid is exhausted for the time, but it will still yield the elements of bile if subjected to the elective affinity of the liver. The whole system of the liver is, in fact, calculated upon economic principles; the bile is necessary to the completion of the process of digestion, and, at the same time, it contains principles which, if retained, prove poisonous.

If we observe this husbandry of arterial blood in the higher animals, among which the respiratory system is so largely developed, we might, *a priori*, have expected an extension of the plan in inferior grades of creation, where the pulmonic system degenerates notably. And, accordingly, we have seen that, in reptiles, where the lungs become cellular sacs, and among fishes, where they are replaced by gills, not only is the bile, but the urine also, elaborated from venous blood. The small quantity of arterial blood sent to the liver, in all classes, by the hepatic artery, and to the kidneys, in reptiles and fishes, by the emulgents, is not to supply the pabulum of their special secretions, but to the end that they may be vivified and nourished like every other part of the organism to which they belong.

To ask whether secretion can take place from venous blood or not, therefore seems to me a most puerile question. Had not secretion been destined to take place from the blood of the vena portarum, nature would not have been at the pains to distribute it through the liver,—the peculiar arrangement is already an answer to the question; the end of it is, as I have said to economise arterial blood.

London and Edin. Monthly Journal of Med. Science, Sep. 1841, *p.* 628.

112.—ON THE CONNECTION BETWEEN MALARIA AND THE SPONTANEOUS EVOLUTION OF SULPHURETTED HYDROGEN FROM DIFFERENT LOCALITIES.

By Professor Daniell, King's College, London.

[It has long been known as a fact, but never satisfactorily accounted for, that when ships navigated certain seas and estuaries their copper sheathing became unusually injured, apparently by some chemical decomposition—but for some time this was not even suspected; and an action was in one instance brought by certain merchants against the company which coppered their vessel, on account of the supposed badness of the article; and the verdict was against the defendants. This decomposition is found to take place only or in a great degree in certain localities where the sulphates, as those contained in sea water, act on dead vegetable matter, giving rise as will be seen, to the evolution of sulphuretted hydrogen.

The Lords of the Admiralty first directed the attention of Professor Daniell to the examination of certain waters of the ocean in which their ships had been injured. The first water which he examined was from the river at Sierra Leone, taken at three miles from the mouth. Upon drawing the cork there was a powerful smell of sulphuretted hydrogen, which he at first thought to have been generated from some change which had taken place in the water after it had been bottled, from the decomposition of some animal or vegetable substance, but he found this to have been impossible, as the whole sediment did not exceed half a grain.

Sulphuretted hydrogen is found in the waters of Harrogate, and Aix-la-Chapelle, as well as in the estuaries of large rivers, and immense tracts of ocean. In the ocean it is found on the western coast of Africa alone, through an extent of more than 16 degrees of latitude, and reaching in places forty miles seawards, making altogether an area of 40,000 square miles in extent.

The idea of the origin of this sulphuretted hydrogen was first suggested to Professor Daniell by a memoir of Dr. Malcolmson, who speculates upon the origin of sulphuretted hydrogen in the saline lakes of different parts of the world, being "the decom-

position of the sulphates in the waters by the carbonaceous matter of vegetables." Professor Daniell tested this hypothesis by the following experiments:]

On the 2nd of November, 1840, I placed a quantity of newly fallen leaves in three glass jars capable of holding about a gallon and a half of water.

No. 1. Upon the first I poured about a gallon of New River water.

No. 2. Upon the second I poured about the same quantity of the same water, in which three ounces of common salt had been dissolved.

No. 3. Upon the third, the same quantity of water, in which three ounces of crystallized sulphate of soda had been dissolved.

The three jars were then placed in a warm chamber, the temperature of which varied from about 70° to 110°, and the water was filled up from time to time, as it evaporated, and the mixture well stirred.

Upon examining them on the 5th of February, 1841, (three months,) the following was found to be the state of the jars:—

No. 1 had a very disagreeable odour, but produced no change whatever upon paper soaked in acetate of lead.

No. 2 was perfectly sweet, and possessed, indeed, a rather agreeable odour. It produced no effect, of course, upon the test paper.

No. 3 had a most insupportable sickening odour, much worse than that of pure sulphuretted hydrogen, and instantly blackened paper soaked in acetate of lead, throwing down sulphuret of lead with a metallic lustre.

Medical Gazette, July 16, 1841, *p.* 671.

[Professor Daniell then goes on to say:]

The analysis of sea waters generally, and these analyses in particular, show that a large proportion of sulphates is always present in them, and there is no doubt that extensive mud-banks must be formed at the mouths of the African rivers, within the tropics, consisting chiefly of vegetable detritus, in the exact state which is most favourable for this action.

But now a much more important and interesting question than that of the preservation of the copper sheathing of ships forces itself upon our attention, and that is, whether the existence of this deleterious gas in the atmosphere, which must

necessarily accompany its solution in the waters, may not be connected with that awful miasma which has hitherto proved so fatal to the explorers and settlers of the deadly shores of Africa; and whether, if so, science may not suggest something to palliate an evil which is so dreadfully opposed to the progress of civilization in those parts.

When this matter was first brought under my consideration, I was surprised that the nauseous smell which must necessarily be evolved from water impregnated with this gas, at so high a temperature as that of the equinoctial regions, had not been noticed. I have in consequence turned to some of the accounts of the late travels in Africa, to seek for evidence upon the subject; and in the narrative of an expedition into the interior of Africa, by the river Niger, by Macgregor Laird and R. A. B. Oldfield, I found the following important observations:—

"The principal predisposing causes of the awful mortality, were in my opinion the sudden change from the open sea to a narrow and winding river, the want of the sea breeze, and the prevalence of the deadly miasma, to which we were nightly exposed from the surrounding swamps. *The horrid sickening stench* of this miasma must be experienced to be conceived: no description of it can convey to the mind the wretched sensation that is felt for some time before and after daybreak. In those accursed swamps, one is oppressed not only bodily but mentally with an indescribable feeling of heaviness, languor, nausea, and disgust, which requires a considerable effort to shake off."

Now, these observations were made in the very locality from which some of the first waters which I examined were taken, and nothing more is wanting to identify the cause of the rapid decay of the ship's copper with that of the mortality of the climate.

It has been experimentally found, that so small a mixture as a fifteen-hundredth part of sulphuretted hydrogen in the atmosphere, acts as a direct poison upon small animals, and the sensations of langour, and nausea, described by Mr. Laird, are exactly those which have been experienced by persons who have been exposed to the deleterious influence in small quantities.

The symptoms, in cases where this gas is breathed in a state of concentration, well known to medical men, are sudden weakness, and all the signs of asphyxia: the individual becomes suddenly weak and insensible; falls down, and almost immedi-

ately expires. When the exposure has been too slight to cause serious mischief, the individual is affected with sickness, colic, imperfectly defined pains in the chest, and lethargy.

The close investigation which I have since given to the subject, more and more convince me that the worst cases of *malaria* are generally connected with the presence of sulphuretted hydrogen.

There is a paper in the twenty-ninth volume of the *Annales de Chimie*, p. 225, by Signor Gaetano Giorgini, which offers the strongest possible confirmation of my opinion.

"The observation of Signor Giorgini has been drawn to the state of the atmosphere in the neighbourhood of certain marshes on the borders of the Mediterranean; and by reference to historical data, and various documents, he has proved the great importance which attaches to the circumstance of their being, at times, in communication with the sea, so as to have a mixture formed between their waters and that of the sea. Both ancient and modern authors have announced the fatal effects produced in the neighbourhood of marshes by such mixture, and a local belief of the same thing is very common and strong.

On the south of the Ligurian Apennines is a marshy shore, bounded on the west for twelve miles by the Mediterranean, on the south by the river Serchio, and on the north by the river Frigido, a torrent commencing at the foot of the Apennines, in the state of Massa di Carrara, running three or four miles over the land, and then falling into the sea. The plain is from two to four miles wide, and is traversed by a few short torrents or streams; among these are the rivers Camajore and Pietra Santa, which divide the plain into three separate basins. The rain and spring waters which flow into the three basins mentioned, are slowly discharged into the sea by natural or artificial canals, penetrating the sand-bank, which exist on the sea-side.

The level of these stagnant waters is between that of high and low water in the neighbouring sea; there being but little difference between these two points in this part of the Mediterranean. In this state of things, formerly, when the waters of the sea rose from any circumstance (unless the waters of the marshes were very high), they used to return up the ditches, fill the basins, and inundate the country to the foot of the mountains; and with a north-west wind, the waves used to penetrate with force to the interior. The mixture of fresh and salt water thus formed,

and which, in summer, was rarely changed, became corrupt, and spread infection over the neighbourhood of the most destructive kind.

In this way the effects of the malaria were reproduced annually in the neighbouring country, with all their peculiar horrors: the population, though small, presented feeble infants and diseased men, old age being unknown there. All attempts to avoid the scourge, by living on the hills, or in the interior, and frequenting the plain when the business of cultivation essentially required it, were vain; they fell victims to the extensive influence; and such being the effects upon inhabitants of the country, much more rapidly did a stranger suffer from the deleterious atmosphere; one single night, in the months of August and September, causing inevitable death to the incautious traveller who should stay so long in this infested country.

Such was the state of things until 1741. Previous to that time, Gemignano Rondelli, Eustachio Manfredi, and Bernardino Zendroni, had successively insisted upon the necessity of excluding the sea from these marshes; and, in 1740-41, a sluice, with folding doors, competent to give emission to the waters of the marsh, but prevent the sea from entering, was constructed at the mouth of the Burlamacca. The most complete and unexpected success immediately followed upon, and has continued with, this work. The year after its completion there were no appearances of the terrible maladies which previously appeared every year. The inhabitants soon recovered health, and the land being very fertile, the population rapidly increased, and is increasing at this moment. Viareggio has become a considerable town, and so completely has all suspicion of its insalubrity disappeared, that the first families of the city of Lucca have for years built their summer seats there. Notwithstanding the success of the precautions taken at this part of the coast, the neighbouring parts were long left a prey to the destroying influence of the mixed marsh-waters; and the inhabitants around the basins of Motrone and Perotto were not considered until the year 1804. In the years 1809, 1810, 1811, similar means were taken, with the best effects to the inhabitants of Montignosso and the vicinity; and, in 1812, a sluice was constructed on the Cinquale, which perfected the arrangements in this part, and made a large portion of country equally healthy with Viareggio. To complete the arrangement, it was now

only required to guard the ditches of Motrone and Tonfalo with sluices; the former was finished in 1819, and the latter in 1821. Since that time the diseases of malaria have ceased so entirely at all points, that no other dangers are now incurred regarding the insalubrity of the atmosphere than such as may arise from neglect of these sluices, which the inhabitants of the country should regard as their palladium."

May not the jungle fever in India depend for much of its malignity upon the same cause? The soil in many parts abounds not only with the nitrates of potassa and soda, but the sulphates of soda and magnesia; these become washed down by the periodical rains, and mingling with the decaying leaves, the mutual reaction takes place.

To bring the matter nearer home. Is it impossible that the minor insalubrity of parts of our own coast, such as that of Essex, may have some reference to the same causes acting in minor degrees? The mud of the river Thames may surely produce the same decompositions of the sulphates in the sea water as that which we have traced in other places. I find that there is a prevalent idea, which deserves investigation, that the ships in the Medway are liable to greater waste of their copper than those at Woolwich, or other places on the Thames.

By the kindness of Sir Isambard Brunel, I have been favoured with the particulars of a very remarkable phænomenon of this kind, which attended the progress of the Thames Tunnel, and which proved of great annoyance, and was the cause of great suffering to some of the workmen. This was the evolution of great quantities of carburetted hydrogen mixed with sulphuretted hydrogen gases. In 1837 the smell was extremely fœtid. "It frequently rushed out from between the small boards of the shield, used to scour the ground with great force, bursting into a flame, which sometimes extended over some feet, and was generally accompanied by a loud roaring or hissing noise."

And here again it may be asked, as with regard to the injurious effects of sulphuretted hydrogen upon the copper of ships, can science indicate a remedy, as well as point to the cause of the disease? And again I would reply, that by furnishing an easy method of detecting the evil, she furnishes you with timely warning to fly from the infected regions. No vessel should be allowed to cast anchor or linger in sulphuretted waters. But if

paramount duty should oppose itself to such a course, we have a certain remedy to propose. You have seen how instantly chlorine destroys the gas. Chlorine and sulphuretted hydrogen cannot co-exist together. Plentiful fumigations of chlorine would therefore infallibly prevent the deleterious effects; and the antidote is at once cheap, and incapable, under proper management, to produce any injurious effects to counterbalance its advantages.

Medical Gazette, July 23, 1841, *p.* 700—703.

[The above interesting opinions appear to have been some time since anticipated by Dr. Robert Hamilton, of Lyme Regis, the author of a pamphlet published in 1793, on the marsh remittent fever. This fact is communicated by Dr. England, of Wisbech, who gives the following quotations from this pamphlet of Dr. Hamilton:]

"The remittent fever is the same disease every where in the neighbourhood of low swampy or marshy grounds, which are subject to be overflowed by the freshes after great rains, or to be *covered occasionally by inundations from the sea.*." In allusion to the undrained state of marsh land and the Bedford level at that period, he says, "The banks in those places near the sea are subject to be broken by the impelling force of high tides, accompanied with strong gales of wind; and those in the inland parts of the country are liable to breaches from the weight of water after great rains. The inundations from the sea are generally followed by worse consequences, in respect to health, than those from the fresh water. If they extend far, they cover much low ground under cultivation, and fill many ditches, which, in many situations, cannot be drained by any other means than evaporation by the heat of the sun. Dead fish, left upon the overflowed land, become putrid, and animal and vegetable life destroyed by the salt water, in the various insects, reptiles, and smaller order of animals, and the different vegetable productions which happen to be covered by it; and the miasmata which must arise from such an accumulation of putrefaction produce the worst kind of remittent fevers." After one of the irruptions of the sea, he observes, "The stench of the exhalations arising from the corrupted stagnant water, and putrid half-dried mud or ooze, was most intolerably offensive; the effluvia was almost suffocating; and it was almost impossible

to avoid a nausea, a languor, and a constant spitting, whilst within their influence."

Medical Gazette, Aug 12, 1841, *p.* 790.

[We will likewise here give the opinions of Dr. James B. Allan, which may be seen in a most interesting paper which he has lately published. It is remarkable how nearly this gentleman agrees in opinion as to the apparently true cause. His paper is "On some of the predominant Diseases of the African Islands." Speaking of the Comoros he says:]

Looking on its high and ragged peaks stretching from end to end, a medical visitor would be suspicious of its salubrity on approaching, and still more so on landing. Ravines, opening to the sea, cleave the whole country into hills and valleys. Some of the former are of surmountable ascent, others are a thousand and more feet in perpendicular height, having streams of water gushing over them. The valleys, composed of alluvial soil, are thickly wooded, while the hills, formed of a stiff clay, based on granite and greenstone, are covered with grass up to their necks and rocky summits, which are only discernible here and there over a dense forest. The change produced by such an elevated vegetation as this on the state of the surrounding atmosphere, would, on a comparison with different results in other islands over the globe, form a subject of no mean interest. Here, however, such an inquiry would be out of place; and noting only that the effects of this difference are, as already mentioned, rains during the whole year, causing in the heated valleys an endless growth and decay of vegetable matter, we shall pass on to Zanzibar. This island is apparently not a thousand feet high. Low and swampy along the coasts encircled by extensive coral reefs, and many low flat jungly islets, it is also wooded throughout. Except in the neighbourhood of the town, where there are some sand banks, no soil nor rocks were seen to interrupt the layer of rich black loam that spreads over the country, producing every tropical plant, particularly those of the palm tribe, in great abundance. Constantly subject, like most low lands bordering on the equator, to alternate rains and calms, it is, moreover, submerged by the tides in many places, although these in such low latitudes rise only six or eight feet. Thus differing from Johanna as much in formation, and nearly every external character, as in position, yet it is governed by

similar physical changes, peculiarly adapted for the same rapid advancement of decomposition of vegetation, and so far developing the same exciting cause of disease in common with the next country to be considered—Madagascar.

[Here we have rapid and extraordinary decomposition of vegetable matter in proximity to the ocean,—"it is submerged by the tides in many places." The wood in some of the bogs is so dense down to the brink of the ocean that landing is almost impossible—"the rankness of vegetation is almost incredible."

No land could be better adapted for retaining moisture, or for the speedy growth and equally quick putrefaction of the herbage it bore; and accordingly in the months of December, January, and February, the general surface was a green putrid pulp. On going out before sunrise, the atmosphere was, as in the jungles of India, like the smoke from gunpowder, and in the intervals of sunshine the same sickening vapour could be seen rising from the earth like a white cloud. Perhaps in this atmosphere was suspended the great remote cause of fever; at any rate, from April to November, no such atmosphere was perceptible, and people calculate then on health, with as much certainty, as in the most wholesome climates of the world. Conjoined to decayed vegetable effluvium, there was another not unworthy of notice. From about ten miles south of Point Rafallo, runs out one of those great coral reefs which everywhere surround the coast, forming safe and extensive harbours. At the time of the rains, the curious inhabitants of the coral were observed to be liable to as hurried life and death as the vegetable kingdom. On the ebbing of the tide, this extensive animal surface was in a great measure left dry and exposed to the sun's rays; and although the shore was nearly a mile distant, yet the odour given off was disgusting in the extreme.

[Here we have similar facts to those related by Professor Daniell. The overgrown vegetable matter, the animal matter, and the disgusting odour which evidently resulted from the evolution of sulphuretted hydrogen as before related. When the marsh remittent fever commenced the patient felt "nausea, languor, inequietude, yawning, chilliness, and thirst. Shortly the nausea disappeared, but the other symptoms became confounded, with heaviness of inspiration, a sense of tightness over the chest,

head-ache, and intolerance of light, pain along the spine, especially in the lumbar region, and an uneasiness, amounting to pain, throughout the whole frame, which the most enduring tried in vain to sooth by constant change of posture, &c." The mortality was dreadful. In Budderam 300 out of 1100 native soldiers died. In the French garison the mortality was one-third of the whole: "not ten per cent. of those attacked recovered". The following circumstance also confirms what Professor Daniell advances with respect to the poison not crossing water.]

It is deserving of notice, that all who slept on board ship escaped: every victim seen or heard of, had passed one night on shore; and no instance of recovery was known in those who were taken on board affected. The writer had a vessel of 100 tons moored within the reef at Foul Point under his charge, mainly for the purpose of protection from sickness. Such as remained in her all night were quite healthy; but not one slept on shore with impunity. The same occurred everywhere else. There is, however, a fact still more worth mentioning; no man labouring under any form of dysentery or diarrhœa was attacked. This was first observed at Johanna in May 1833. Two dysenteric seamen were encamped on shore, and three healthy men, envying their inactive life, escaped from the ship, and together with some men from an American ship, slept two or nights in the tent. The consequence was, that all died of remittent except the two former. Several other instances were subsequently mentioned; and at St. Mary's, exemptions of the same kind were quite common.

London and Edinburgh Monthly Journal of Medical Science, Aug. 1841, *p.* 548—551.

[Another singular fact mentioned by Dr. Allan is that at Port Lewis a land breeze prevails uninterruptedly for ten months in the year, and during that time intermittent fever is seldom seen:—but with the commencement of the breeze from the sea to the town the intermittent fever commences and prevails so long as the sea breeze continues. The remittent fever above described baffled all the medical men. The intermittents were more successfully treated with large doses of sulphate of quinine, from 20 to 25 grains at once. The first dose would produce a glow of heat over the whole frame, palpitation, throbbing of the carotid and temporal arteries, suffusion of the conjunctiva and

giddiness. In an hour or so this ended in profuse perspiration and sleep. During the intermission another dose was given, which in the double tertian always prevented the second day's attack. This medicine was continued with wine every six or eight hours and generally succeeded in checking the disease.]

113.—OUTLINE OF A PHILOSOPHICAL HISTORY OF THE REPRODUCTIVE FUNCTION.

By W. B. Carpenter, M.D., Bristol.

[We extract the following paper verbatim, as a condensation of it would be difficult.]

1. In the Red Snow, and other simple cellular plants, (among which we may now reckon the *Torula Cerevisii,* or yest-fungus) *each cell* reproduces the species by bursting, so as to liberate the reproductive granules which it contains. These granules I regard as equivalent to those which compose the *nucleus* or *cytoblast* of other cells; and this, so far from fulfilling its functions in the production of the original cell, (as Schleiden supposes) I believe, with Dr. Barry, to resolve itself into the germs of new cells subsequently formed within it. The only difference, then, between a *reproductive* cell and the *ordinary* cells, where these are distinct (as in all but the lowest Cryptogamia) is, that in the former, the granular germs are diffused through the whole cavity, and are developed, when liberated from it by the rupture of the vesicle; whilst, in the latter, they are generally (by no means universally) concentrated in one spot, forming the nucleus or cytoblast.

2. When any of the germs of the higher Algæ, the Lichens, or the Hepaticæ develope themselves, the process simply consists in the formation of a primary cell, from which others are subsequently evolved; at first *linearly,* as in the Confervæ, afterwards in the form of a flat membranous expansion, which, in terrestrial plants, absorbs from the earth by its lower surface, and respires, exhales, &c., by the upper; and this first-formed frondose expansion remains as the permanent form of the plant.

3. The germs of the Ferns, equally unassisted in their early development, also evolve themselves into a linear, and afterwards

into a membranous expansion of cells; but all the *peripheral* portion of this is temporary, serving as a cotyledon; it is from the *central* portion, that the permanent structure is evolved; and the primary frond, having fulfilled its temporary office of absorption, respiration, &c., decays away like a cotyledon.

4. In the Flowering plant, the cell germs produced in the pollen-grain are received into an ovule, and furnished with nutriment already prepared; but the nisus of development remains the same. The first tendency is, here also, to the formation of a membranous expansion,—the cotyledon, which absorbs, more or less completely, the albumen of the seed; it is from the centre of this that the permanent structures take their origin; and having performed its temporary function of absorbing and assimilating nutriment for the embryo, it decays away.

5. In the Animal kingdom, there is now good reason to believe, that whenever separate germs are formed, they are received into ova, as in phanerogamic plants; spermatozoa and ova having been traced as low as the polypes. But the comparison between the modes of development holds good to a remarkable extent. From Dr. Barry's observations I think it may be inferred that in all instances, the ovum receives its real germ from the spermatozoon, just as the ovule from the pollen-grain in plants. The spermatozoon I consider as nothing more than a long cell, endowed with the same kind of power of movement which cilia, oscillatoria, &c., possess, and this for the purpose of finding its way into the ovum; a process analogous to the insinuation of the pollen-tube in plants. Each spermatozoon I should regard as analogous to the *whole* pollen-grain of plants, being ejected from the male organs upon the female; and the only difference consists in the mode in which its contained germs get access to the ovule.

6. The first process of development is the formation of a mass of cells, which soon spread out into a membranous expansion, —the *germinal membrane*. This is not flat however, but spherical, so as to inclose the albumen. The common opinion is, that the layers extend from the cicatricula over the whole yolk, and at last meet so as to envelope it. From Dr. Barry's observations, however, it appears that the germinal mass sends forth a hollow process, which gradually absorbs the albumen into its cavity, and so gains the opposite surface of the yolk-bag.

Lond. and Edin. Monthly Journal of Med. Science, Sep. 1841. *p.* 655.

114.—POISONING BY ARSENIC.

[The medical and scientific world of Paris has been for some months in a continued state of excitement with respect to the above subject, occasioned in the first place by certain views advanced by M. Orfila. We shall attempt to give the most important points on which the contest has turned.]

M. Orfila andvanced, in what he considers as a new toxicological system, the fact that arsenic may be taken into the stomach, and produce death, without any remaining in that organ after death, the poison having been absorbed into the system and deposited in the tissues; and that there is a peculiar tendency to pass of arsenic by the urinary excretion. Acting on this fact, he in several cases of medico-legal investigation used the whole of the tissues, submitting them to certain processes of decoction, evaporation, and incineration, in order to collect and detect the arsenic pervading the whole system. He likewise stated that he had detected arsenic in the bones of persons who were known not to have taken this poison, he considers it as universally present in certain structures, and gives it the name of *normal arsenic*.

Statements having such a direct bearing on subjects of such awful importance, it was not to be expected, would be received without any examination. The *Academie des Sciences* appointed a commission to investigate the subject. M.M. Flaudin and Danger were the reporters; they advanced the following facts in opposition to M. Orfila's statement.

1st. That animals poisoned with a large dose of arsenic or acutely, do not urinate.

2d. That when they do urinate, as after a weak dose, their urine does not contain any arsenic.

3d. That there are generally produced, during the operation recommended by M. Orfila, false stains of sulphite and phosphite of ammonia. That these present physical and chemical properties so similar to those possessed by the true arsenical stains, as to mislead even skilful experimenters.

4th. That there is no such thing as normal arsenic, M. Orfila having been deceived by these false stains.

5th. That if the evaporated residuum were deflagrated with nitrate of potash, (as practised by M. Orfila,) the arsenic might be evaporated, and thus escape detection.

This report being received by the Academie des Sciences, produced a great sensation, as attacking the opinions of a toxicologist so renowned as M. Orfila, whose statements had been acted on in several delicate cases in the courts of law.

The *Academie de Medicine,* in which M. Orfila possesses greater direct influence, appointed a commission to examine the contradictory statements. These are the conclusions of their report:—

1st. That animals do urinate after a large dose of arsenic.

2d. That the false stains mentioned by M.M. Flandin and Danger are not generally produced; these gentlemen having always failed in producing them before the eyes of the commission.

3d. That these false stains when produced, are very readily distinguished from true arsenical stains by the following characters: The arsenical stains are brown, and glisten brilliantly; the false stains are dull. The arsenical stains are soluble in cold nitric acid, the false require boiling; the arsenical stains produce with nitrate of silver a brick-red colour, while the false stains give a yellow tinge.

4th. That the existence of normal arsenic is now questioned by M. Orfila himself.

5th. That carbonization of the residuum after evaporation by means of sulphuric acid (used by M.M. Flandin and Danger) is preferable to deflagration by nitrate of potash used by M. Orfila. But that it is requisite to ascertain that the sulphuric acid used contains no arsenic.

6th. That the instrument recommended by M. Orfila is at the same time the simplest and most effective, viz. Marsh's Apparatus, modified by a lengthened bent tube in the middle of which is placed a piece of asbestos, under which is placed a spirit lamp. The arseniuretted hydrogen is decomposed by the caloric and asbestos, a ring there formed, and the hydrogen escapes pure, and should be burnt in contact with a cold condensing surface to retain the arsenic if any escapes.

[Though not expressed in the words of the report, such are the important toxicological principles which we have condensed from the several lengthened and stormy discussions which have taken place in the Academie.]

Bulletin de l'Academie de Medecine.

115.—SUBCUTANEOUS OPERATION IN CASES OF HERNIA.

By M. Guerin, and M. Bouchet.

M. Guérin presented to the Academie de Medecine of Paris, Sept. 28, a patient on whom he had operated July 11th, for old inguinal hernia, by the subcutaneous method. He stated that the patient presented himself at the hospital with two inguinal herniæ "of some standing, perfectly reducible, and easily retained by means of a truss." The operation was as follows: The hernia being reduced, and the patient placed in the usual position, with his thighs separated and semi-flexed, I raised a transverse fold of the skin of the groin, pubes, and root of the scrotum, and drew it from below upwards to a level with the orifice of the inguinal canal. At the base of this fold I plunged a small bistoury up to the entry of the canal, above and to the interior of the spermatic cord, which an assistant held aside. By this opening, I passed a blunt-pointed convex myotome, with a portion of the blade not cutting. Having passed this, I cut with it from behind forwards, and from within outwards. I then turned the blade, and incised successively from above downwards, about the angle of the pubes, the two divisions of the fallopian ligament, and the fibres of the great oblique which there terminate. Lastly, I made several sacrifications in the intermediate points.

The operation lasted ten minutes, no fever or reaction followed, and the cicatrization of the puncture took place immediately. On the fourteenth day the effused structures had become hardened, and were able to resist the expulsion of the hernia. At the end of a month he resumed his work without a truss; no hernial protrusion in spite of a cough and active exertion followed.

Bulletin de l'Academie.

[The former case exhibits the advantages which we may derive from the subcutaneous operation in curing a present annoyance, and obviating a future danger, the paper which follows recommends the subcutaneous method to be used in operating for strangulated hernia itself.]

M. Bouchet, in a journal published in November, has written an elaborate memoir on the subcutaneous operation in cases of strangulated hernia, from which we make the following extracts.

"We propose to remove the cause of strangulation without opening the sac, by means of a special instrument introduced into its cavity through the internal orifice, by means of a puncture made in the integuments."

He first considers the causes of strangulation, and divides them into two classes, in the one the contracted and indurated neck of the sac, in the other the aponeurotic rings produce the strangulation; he then mentions the tests given by Scarpa to discriminate between these two causes.

In the first case, viz. "when the neck of the sac is the strangulating point, the peritoneum must be included in the division, the operation may be called *intra-peritoneal kelotomy.*"

"The instrumental apparatus consists of a bistoury with a narrow blade, like that of the bistoury used in tenotomy, and a masked kelotome," (a kind of lengthened and flat trocar gilding in its canule, the writer gives an accurate description of it with two plates).

"The operation may be divided into four periods,

1st. Puncture of the abdomen and opening the peritoneum.

2d. Passage into the sac by the internal orifice.

3d. Division of the structure *(débridement.)*

4th. Reduction of the hernia."

First, The punctnre should be made at the point, where a fictitious line, drawn from the *antero superior prominence* of the ileum to the *linea alba*, reaches the extreme edge of the rectus muscle. Here there is no aponeurotic resistence, being lined only by the fascia transversalis and the peritoneum, both easily torn. The skin, adipose tissue, and aponeurosis should be divided with a bistoury. The kelotome should then be used, being directed inwards towards the pelvis, "for in this direction the folds of intestine yield before the instrument."

Secondly, The kelotome should be glided along the abdominal parietes to the seat of the stricture, and insinuated between the constrictory neck of the peritoneal sac, and the fold of intestine.

Thirdly, Convinced that the kelotome is within the sac, it must be held solidly fixed against the anterior parietes of the sac, so that in drawing back the canula, the cutting edge may be directed upwards and forwards. A slight pressure and sawing motion effect the necessary division.

Lastly, The reduction is effected by the ordinary taxis.

EXTRA PERITONEAL KELOTOMY.

In the second division of herniæ, viz. when the strangulation is produced by the aponeurotic ring, he recommends a different operation, to which he has given the above title.

"Like the last it consists of four periods.

1st. Puncture to introduce the kelotome.

2d. Passage under the ring.

3d. Division; and 4th. Reduction.

The puncture should be made about half an inch below the point indicated for the intra peritoneal operation. The kelotome having arrived at the *fascia transversalis* should be glided towards the ring. The instrument is readily glided under the ring, and the necessary division effected."

[Such are the operations recommended as a substitute for the ordinary method, which has proved so fatal in the Parisian hospitals. There are some suggestions in this paper which might be acted upon under peculiar circumstances, but great consideration would be required before having recourse to them as the author himself states that hitherto he has only practised them on hernias artificially produced in the dead body.]

Journal des Connaissances Medico Chirurgicales.

116.—SPONTANEOUS CURE OF DROPSIES.

By M. Mondiere.

The author is desirous of drawing attention to the fact that nature occasionally performs a spontaneous cure in cases of dropsy, and wishes to draw a conclusion with respect to their practical treatment from the indications which this fact may afford.

He says, there are few practical physicians but have found dropsies occasionally cured in a very short time by some spontaneous *hyperdiacrisis*, after they have been giving remedies to produce an artificial crisis, whether by stool, urine, &c., and that too in spite of our remedies, which have been acting on other organs. Hence results the necessity of searching out for the tendency of nature, in order to second it, and instead of using certain routine remedies, the propriety of consulting the antecedents, and finding what is the *predominant secreting organ.*

M. Mondiere considers that a natural or accidental predominence of certain secretions gives to such secreting organs the faculty of furnishing abundant evacuations, which may prove critical in certain dropsies And that as the morbid condition is often only an exaggerated state of the natural function, the practitioner should endeavour to detect in each case of dropsy what has been the previously predominant excreting organ, and try to establish the critical flux thus indicated.

The writer gives several cases in which there was a predominant secreting organ, and followed the indication with success, as for instance, the occasional abundance of urine, frequent diarrhœa from slight causes, liability to vomiting, and predisposition to excessive perspiration. The following are his conclusions :

1. Crises in dropsies are not rare.

2. That crises may take place from all the secreting organs, or from the entire mucous membrane, or an accidental secreting surface.

3. That each individual has a secreting organ more active than the other organs, which the physician should detect in order to solicit its activity by appropriate medicines.

4. That it is in vain to attempt even by active remedies to excite an organ which is not predominant in the individual.

L'Experience.

117.—FORMATION OF BONE.

By M. Flourens.

[M. Flourens read before the Académie des Sciences, a highly interesting memoir on this subject; the whole paper is well worthy a careful perusal. The following are the conclusions at which he has arrived from numerous experiments.]

1st. Destruction of the medullary membrane of a bone is followed first by death of the bone, then by the formation of a new medullary membrane, and lastly of a new bone.

2d. The new bone is formed between the new medullary membrane, and the periosteum.

3d. The new medullary membrane, and the periosteum form at first one, and the same membrane, thick and divisible into several layers.

4th. The new medullary membrane at first united to the periosteum, gradually becomes separated from it, the new bone being formed between them.

5th. The tissue of the new medullary membrane at first thick, and fibrous, like the periosteum (which is also then thickened) assumes gradually a texture finer and more delicate, till it resembles perfectly the primitive membrane.

6th. The internal face of the medullary membrane then formed, gradually eats away the old bone and finishes by absorbing it.

[M. Flourens instituted other experiments to demonstrate these phenomena still more clearly, and to determine their succession and progress; these results follow—]

1. When the medullary membrane has been destroyed, the periosteum, without having been touched, becomes thickened and tumified.

2d. There forms on the external face of the old bone a cartilaginous layer.

3d. This cartilaginous layer emanates from the periosteum, and cannot be detached from it, without laceration.

4t. This layer is the first germ of the new bone.

Thus then, the bone is formed in cartilage, the cartilage is formed by periosteum. Ossification is then the transformation of periosteum into bone.

[In these cases the medullary membrane had been destroyed. He now destroyed the entire periosteum. The result was—]

A new bone was formed in contact with the medullary membrane within the old bone. When the external periosteum has been destroyed, the *internal periosteum* or medullary membrane replaces it to a certain point in the reproduction of bone.

[Other general results—]

1st. There is in all bones an apparatus of formation, which is the periosteum.

2. There is an apparatus of resorption, which resides in the medullary membrane.

3. The medullary membrane is a continuation of the periosteum.

Gazette Medicale.

118.—NUTRITIVE POWER OF GELATINE.

A very interesting report has been presented to the Academie des Sciences on this important subject by a commission appointed for that purpose, and which has conducted experiments during ten years. M. D'arcet had so strenuously urged the advantages of using gelatine procured from bones, as a substitute for meat in the formation of soup, that it was extensively employed in many hospitals and poor-houses. Subsequent experiments denied the nutritive power and even the wholesomeness of gelatine, as an article of food. The commission have extended their labours to the examination of other substances. These are the conclusions at which they have arrived:

"1st. We cannot by any known method extract from bones an aliment, which, either alone or mixed with others matters, can be substituted for flesh meat.

2. *Gelatine, albumen, fibrin,* taken alone support life only for a limited period, and incompletely. In general these substances soon excite an insurmountable disgust, so that the animals experimented upon will rather perish of hunger than touch them.

3d. The same substances, artificially compounded, and agreeably seasoned, are taken with greater readiness and for a longer period, but ultimately they afford no greater support, and the animals so fed at length die of complete inanition.

4th. Muscular flesh, (in which gelatine, albumen, fibrin, are united according to the laws of organic nature, with other substances, as fat and different salts,) suffices even in small quantity to support life for a long time.

5th. Bones are nutritive in a less degree, but when the contained gelatine is extracted by boiling or a chemical process, its nutritive power is very much less, and often entirely disappears.

6th. *Gluten,* such as is extracted from wheat or rye flour, is *alone* sufficient to afford complete and prolonged nutrition."

Rapport a l'Academie Royale des Sciences.

119.—SOUNDS OF THE HEART.

M. Cruvelhier publishes his observations on an infant born with its heart completely exposed and protruding through an aperture in the thorax: it lived twenty-four hours after its birth.

He found only two conditions of the heart, viz. contraction and dilatation; that of repose generally mentioned by authors was completely wanting. During the systole, the parietes of the ventricles became pale, their surface rugged and in folds, and the fleshy colours more marked. "The two sounds of the heart have their seat at the origin of the pulmonary and aorticc pariteties, and their cause in the flapping *(claquement)* of the sygmoid valves. The first sound which coincides with the ventricular systole, and with the dilatation of the arteries, is the result of replacing *(redressement)* of the sigmoid valves, previously lowered. That the second sound, which coincides with the ventricular systole and with the contraction of the arteries, is the result of the lowering of the sigmoid valves, pushed down by the reflux of the retrograde blood."

Gazette Medicale.

120.—CAUSE OF HARE-LIP.

By M. Bouisson.

M. Bouisson, of Montpelier, considers that all theories hitherto advanced are insufficient to explain the formation of labial fissures, as mechanical causes, the action of adhesions, imagination of the mother, primitive alteration of the germs, or arrest of development. These he rejects, and founds his explanation on the result of recent embryogenic studies in Germany.

It has been observed by Meckel that the intestinal tube is at first perfectly closed at its superior extremity, and that the aperture of the mouth is subsequently formed by absorption, acting both from within outwards, and without inwards, three separate openings have been observed, separated by yet existing adhesions. Now M. Bouisson lays down this proposition "that the same organic action which presides over the formation of the buccal aperture, presides also over the formation of labial fissures." As to the latter it has variable limits, sometimes acting to a very small extent, producing simple hare-lip, at other times so extensive as to produce either partial or entire destruction of the superior lip. One consideration advanced by the writer favours this theory, viz. that the edges of the two fissures, both that of the mouth, and the abnormal one are organized in the same manner, are insensibly continous by a

rounded angle, and offer the same degree of coloration and sensibility. The reason why the upper lip is more frequently affected than the lower, is, that it is situated between the mouth and the nostrils, which are both the seats of an absorbent action

Journal des Connaissance Medico-Chirurgicales.

121.—TINEA FAVOSA, A VEGETABLE PRODUCTION.

M. Dumas presented to the Academie des Sciences, a memoir written by M. Gruby, in which he announces that by multiplied researches, he has detected that in tinea favosa, a vegetable production is constantly present under the cuticle; it is very minute and circular, when opened it is found to contain a multitude of minute granules. In other respects it is precisely similar to the vegetations found in saccharine urine. It is referrible to the class of mycoderms. A commission is appointed to report on it. At a subsequent meeting a communication was received from Germany, claiming for M. Scheunlen, successor of M. Hüfland, of Berlin, the merit of detecting vegetation in the crust of tinea favosa, and which is published in *Les Archives de Muller.*

Gazette Medicale.

122.—FUNCTIONS OF THE SKIN.

By M. Ducros.

[M. Ducros has made a report of his experimental researches on this subject to the Academie des Sciences; a commission has been appointed to examine his report; awaiting the result of their investigations, we give a short *resumé* of his experiments, which, if established, may have great influence over our treatment of diseases.]

1st. That covering the skin of animals with a coating of gum lac kills them more or less rapidly, according to their relative strength, producing convulsions, which resemble those of epilepsy.

2d. That animals covered with gum lac, and placed under the influence of an electric machine, perish twice as quickly.

3d. In order to see if metals, which have physical characters opposite to those of resins, I placed thin metallic plates in contact with the skin of animals, after having cut off their hair. Death resulted, with symptoms of weakness, in opposition to the phenomena produced by gum-lac.

4th. Placing a covering of gum-lac on the metallic plates hastened death.

5th. Having placed the animals, provided with their metallic coats, under the influence of an electric machine, he alternately produced phenomena of life and death, invigorating the animals, when charging them with electricity, and *vice versa*.

[From these experiments, M. Ducros was induced to try the use of metallic plates in the cure of disease. The following are his conclusions:]

1st. Neuralgia, tic doloreux, &c. which exist independently of all organic lesion, are sometimes cured in a few minutes.

2d. Tic, complicated with some lesion, may be calmed, but not cured by the metallic plates.

3d. Acute rheumatisms with fever, and congestion of the articular tissues are cured, provided there be only pain and congestion.

4th. The use of metallic plates, coated with gum-lac, in acute inflammatory rheumatism is not beneficial, but aggravates the disease considerably.

5th. Metallic plates used for neuralgic affections when there is anæmia, and general weakness, increase the pain.

6th. In anæmic neuralgia, the greatest relief is obtained by resinous applications.

Gazette Medicale.

RETROSPECT.

"We ought not like the spider, to spin a flimsy web wholly from our own materials, but like the industrious bee, visit every store and cull the most useful and the best."

It becomes once more our duty to look back and see how far we have gone, and how much we have gained since we last took a retrospective view of the Medical Sciences. Let us not be ashamed of our own profession, although the rest of the world is on the advance in civilization; and although such rapid strides have been lately made in other Arts and Sciences. It is our business chiefly to attend to what is truly of practical utility to the Medical practitioner, yet we cannot avoid at the same time taking a general glance at the collateral Sciences: they form in fact part of the profession and we cannot be excellent practitioners without at the same time having a knowledge of what is going on in Anatomy, Physiology, Chemistry, and more especially in Pathology. And the more we view the advances made in these branches of study, and more particularly in the latter, the more confident do we feel that our progress is comparatively as rapid as that which has been manifested in any other Art or Science whatever. Our course, however, is a silent one, and almost unknown to the non-medical world.

The medical man who is, generally speaking, decidedly one of the best informed men in the community, not only in matters connected with his own profession, but also in the affairs of the literary and scientific world at large, is able almost as well as any other man to understand the improvements which are taking place around him; for example, he is generally acquainted with the increased and increasing knowledge which Geology has diffused through society, and with the more popular laws connected with Astronomy: he also knows, and to his own

comfort feels, the improvements which have been made in Mechanics. But the world at large is almost totally ignorant of the many beautiful and wonderful discoveries which are being made in our profession: our course, therefore, is a silent one, instructive to ourselves, and beneficial to the world. Take, for example, the practice of Auscultation; although this practice may be actually seen by the patient, what does he know of its value, and how little does he appreciate it! If the discovery had never been made he would have been as well satisfied with his family physician; and even now that he is reaping the advantage and sees the operation, he values it but little, not knowing, and not being able to appreciate its value.

This branch of practice seems likely to undergo some modification, at least in theory, since the opinions of Dr. Skoda, of Vienna, have been published. There is a very important and well known law in nature that sound passes more distinctly through solid than through light bodies; but it is necessary to remember that this is only the case so long as the sound is confined to the medium in which it is formed, for it passes with difficulty from one medium to another; and it is on this law that Dr. Skoda's modifications in the views of Auscultation are chiefly founded. For example, the least noise, as the ticking of a watch, is heard from one end of a table to the other when the ear is placed upon the table or at the edge of it, so that no space intervenes between the table and the ear—the sound is now conducted through one medium uninterruptedly; but if the ear be placed but half an inch from the table, no sound at all is heard, it is intercepted by the lighter medium of atmospheric air. And again, if a person be under water he can hear sound from a considerable distance, if that souud be produced in the water, but if produced in the atmosphere above him he will hear no sound at all, and *vice versâ*. All this applies with strictness to auscultation: for example, in pneumonia the voice is at one time distinct, and at another time indistinct, while percussion shows that no particular change has taken place in the lungs themselves with respect to density—the change must exist in some other way; in some way which interrupts the passage of sound; and this is from the obstruction by fluid matter of the bronchial tubes of the hepatized portion of the lung. But this is not the generally received explanation; as it has been generally considered unimportant to the conducting of the vocal

sounds, whether the air tubes are filled with air or not. In effusion resulting from pleurisy, the sounds of the voice diminish in intensity as the liquid increases, which ought not to be case, if the sounds according to the usual explanation increase according to the density of different media. The common theory, therefore, requires the modification which is given by Dr. Skoda,—the sound of the voice has to pass from one medium of a light nature to one of a denser, and consequently becomes imperfect and almost totally interrupted. It must likewise suffer some degree of reflection as all sounds do when passing from a light to a dense medium. We know that sound only passes well through a hollow tube so long as that tube is hollow and without foreign bodies within it; introduce a piece of cork so as to plug up the cylinder in a speaking tube, which passes in many shops from one room to another, and the voice would be heard very indistinctly, if at all, and then only through the solid parietes of the tube. This shows that the sound of the voice is not conveyed through the *solid* parts of the trachea and lungs, as is generally supposed, but through the air in the hollow tubes of the trachea and bronchi: we know that the voice is heard more distinctly in those parts of the tracheal and bronchial tubes, which are cartilaginous, and as the bronchial tubes lose their cartilaginous structure the sounds become more indistinct. This is explained by what Dr. Skoda calls the law of *consonance.* For the perfection of the sound it seems necessary that the tubes should be perfectly hollow and without any foreign body in their cylinders, and at the same time dense in their structure, or enveloped by dense substance externally. When this is the case the voice is almost as loud in such situation as in the larynx itself, and must consequently impart a louder impression to the ear outside the chest. It seems, therefore, that the commonly received opinion on this subject is erroneous; it seems that the vocal sound is propagated not through the different structures which intervene between the larynx and the chest, but through the different hollow tubes, and of course it is louder when the walls of those tubes are dense than when light. *(Art.* 1.)*

In reviewing the opinions on the action of colchicum, we are struck with the variety of practice adopted by medical men, and

* The figures here and in the following pages refer to the articles in this volume in which the substance of this Retrospective summary is more particularly elucidated.

with the different theories respecting its modus operandi. In arthritic and rheumatic affections every one has found the advantage resulting from its use. In these affections many eminent modern authors have supposed that uric acid or urea is in excess in the blood, and that this, combined with the influence of vascular plethora, gastric, hepatic, and intestinal irritation, is a chief cause of gout: in short that gout results from a disordered state of the fluids of the body, and chiefly of the blood. If uric acid in the blood be one chief cause of gout, we need not wonder at the efficacy of colchicum, since, according to Professor Chelius of Heidelberg, the quantity of uric acid excreted by the kidneys during its exhibition is nearly doubled in the course of twelve days. And to the same effects we may attribute the good which results from its use in most disorders where excessive excitement of the vascular and nervous system prevails, such as cases of severe fever, the attacks of which may be materially shortened or mitigated by freeing the blood of many of its irritating ingredients. (2.)

But if colchicum is proved to have a decided effect in expelling useless and irritating ingredients from the blood, may we not with the same view have considerable reliance on benzoic acid, which, according to the observations of Dr. Alexander Ure, converts the *uric* into *hippuric* acid, the salts formed by which —as the hippurate of soda, potash and ammonia, are remarkably soluble, while those formed by uric acid are exactly the reverse. Thus hippurate of soda requires only two parts of water at 60° to dissolve it, while the corresponding uric salts, which constitutes as is well known the gouty concretions or chalk stones, is nearly as insoluble as uric acid, one part requiring 4000 parts of water to dissolve it. Hence we have in benzoic acid a very important remedy in gouty concretions especially, and likewise in many unhealthy conditions of the urine: and no doubt if the same remedy can thus convert those irritating ingredients in the blood into harmless ones, it will have a decidedly beneficial effect in other inflammatory states of the system, by preventing the formation of what would otherwise injure it; in the same way as colchicum has a good effect, by freeing those particles from the blood when formed in it. Benzoic acid, if given by itself, would irritate the fauces: it is better therefore to give it with phosphate or biborate of soda, since they increase its solubility in water. (12.)

The effects of secale cornutum have been so much discussed in different volumes and papers that it would seem unnecessary to bring forward any further information respecting it; but its effects have of late been better understood, and it has been found of value in other cases besides those relating to parturition. As it is a direct stimulant to the uterus producing a wonderful increase of muscular contraction during parturation, and probably a contraction of its tissues, even in the uninpregnated state, it seems likely to be of great use in many diseases of the womb, resulting from a want of power, as well as for the purpose of expelling foreign bodies such as polypi. We shall thus find it exceedingly useful in menorrhagia when not combined with inordinate action of the general system—in leucorrhœa when independent of inflammatory action—and also in chlorosis with amenorrhœa, and in dysmenorrhœa; bearing in mind that it directly stimulates or excites the organ, and is therefore inadmissible when the womb is already in a state of excitement or inflammation. There is no doubt of its good effects both in menorrhagia and leucorrhœa when given with the preceding limitations, and Dr. Fyfe has also found it of value in cases of dysmenorrhœa, that troublesome affection which often baffles the effects of our most powerful remedies. In one case of this kind where the pain amounted to torture, it appeared almost magical in its effects. (3.) Mr. Moyle, of Helston, relates some interesting cases of the effects of this drug in expelling polypi from the uterus; one of them was about the size of two placentæ, the other of a large orange. (99.) It seems from M. Bonjeau's experiments, that secale possesses two properties, one called *toxic* by which the muscular fibre is stimulated to contract, and which quality is destroyed by a heat of 100 degrees, or by fermentation; and therefore the tincture is to be preferred when this toxic property is required. Secondly, it has a high hæmostatic property: i. e., it restrains hæmorrhage and is therefore valuable in many kinds of fluxes. The hæmostatic property is not destroyed by heat like the toxic property. But this opinion of M. Bonjeau we should beg to disagree with in some respects, as we cannot conceive how he can separate its *toxic* from its hæmostatic quality in hœmorrhage after parturition for example. The medicine stops the flooding not from its hæmostatic quality which M. Bonjeau seems to depend so much upon, but from its producing contraction of the muscular fibres

of the womb, and thereby closing the mouths of the vessels. In other cases it is probable that its toxic and hæmostatic properties may be usefully separated. (55,)

Having already noticed Mr. Lane's opinions on the action of silver on the system, it will not be necessary again to say much on the subject. It is sufficient to say that Mr. Lane considers the *nitrate* of silver pernicious to the skin in this way—it is converted into a *chloride* by the free hydrochloric acid of the gastric juice, and then into an *oxide* in the skin by the action of light and the strong affinity for albumen. This oxide cannot permeate the capillaries, and thus becomes fixed in the skin. He therefore anticipates this process by giving the silver in the state of an *oxide* instead of the common preparation, the *nitrate*, and is thus enabled to persevere in this truly valuable remedy for any length of time without fear of discoloration. This is certainly to be desired; at the same time the cases requiring the administration of the nitrate of silver are generally of short duration, and most of those which Mr. Lane advances to prove the value of his remedy were not of sufficient continuance to prevent the nitrate being given for the same length of time that he gave the oxide. (5.)

Dr. C. H. B. Williams has brought forward, in electricity, a powerful remedy to stimulate the system when under the influence of opium. All other remedies will often fail in rousing the patient from the fatal sleep occasioned by a too large dose of opium. Dr. Williams has completely succeeded in this by passing electric shocks across the shoulder, by the electro-magnetic apparatus. It is often necessary to renew the shocks as often as the patient becomes drowsy. It has the great advantage of exciting the motions of respiration without exhausting the strength and overtaxing the voluntary movements of respiration, which is often done when the patient is perpetually teased and compelled to use exertion in order to be kept awake. (6.)

We referred in our last number to the circumstance of the crusts of the vaccine vesicle being made useful, (especially in hot climates where it is difficult to transmit the lymph in the usual way,) in the process of vaccination. This has been corroborated by the opinion of Dr. Baron and Mr. Coles, who collected a few crusts from the remains of the variolæ vaccinæ on the teats of a cow. These crusts were triturated with pure cold water, the margin and outer layers of each crust having

been previously separated, and with the fluid six children were inoculated with three punctures in each arm; out of these thirty-six punctures only one took effect, and from this one, other children were inoculated with success, the vesicles being perfect in their form and character. This is an important circumstance in many respects; for although in this country the means of communication are so perfect and so rapid that the most sequestered spot can be supplied with fresh lymph,, yet it is often difficult in the warmer regions of the earth to be supplied with this most valuable remedy. (7.)

There are few things more difficult than the management of young children in their several diseases; and this is especially the case where local applications are required to the mouth and fauces. We are accustomed to gargle these parts in the adult, but this cannot be done in the infant and child. M. Velpeau has therefore been successfully using powdered alum, which is to be blown through a quill upon the back of the throat in all cases where the fauces, the tonsil glands, and neighbouring parts are inflamed and swollen. This is an old remedy long ago used in Paris, but we believe not so much so in this country, at least not in the exact way recommended by Velpeau; and from a great number of cases which have lately come under our own observation, we can confidently recommended its extensive use as a most safe and truly efficacious remedy in all the cases above mentioned. The adult can apply the powdered alum to the parts with his finger or with any other instrument, or he may use a strong solution as a gargle; but it is in the child that the practitioner will find it of inestimable use. He must cut up two quills and introduce the end of one into the other in order to make a tube long enough to reach the back of the throat, he then puts a small quantity of powdered alum into the tube and blows it upon the tonsils and back of the fauces. It will be found to relieve the little patient in a very short time. Every practitioner has no doubt met with the most disagreeable affections of the fauces and tonsil glands following scarlet fever, where not only the glands and immediate neighbourhood become implicated, but where the disease spreads into the nostrils and downwards into the œsophagus, and even into the larynx; constituting a very formidable and fatal disease. It is in these cases that the alum will act like a charm. It may be used twice a day. (8.) Alum has likewise been lately used with great

success by Dr. Lynch, of Newcastle, in cases of hæmorrhage as a substitute in some measure for acetate of lead. But Dr. Lynch gives it in very large doses, from 15 to 45 grains three or four times a day, combined with a small quantity of sulphuric acid, and about ʒ j or ʒ iss. of sulphate of magnesia; although the alum alone will be found to have a laxative effect on the bowels. In the ordinary dose which never exceeds 20 grains, the good effects of this drug will not be felt; but in the large doses of Dr. Lynch (which he thinks perfectly safe) it will be found even more efficacious than acetate of lead, and a much safer remedy. (9.)

The good effects of oxide of zinc in cases of convulsion resembling epilesy are brought forward in an interesting case by Dr. Hennis Green. He gives it in two grain doses twice a-day; the doses to be increased two grains every day. In the case which Dr. Green relates twenty-four grains daily were at last given with great success. The fits which occurred frequently before this, now disappeared, and did not return till the remedy was discontinued: on resuming the medicine the fits again disappeared as at first. (10.) M. Janson has for some time been in the habit of giving the hydrocyanate of iron in cases of epilepsy with considerable success; and especially in cases which he calls *nervous* epilepsy, as distinguished from *organic* epilepsy. He gives it in doses of half a grain night and morning, gradually increased to ten grains for a dose. It is necessary to persevere in it for some time. (44.)

The ointment of veratria has been strongly recommended by Dr. Bushnan in cases of dysmenorrhœa, which he says may frequently be owing to perversion of the nervous action of the lower portion of the spinal marrow; and if this ointment can thus alter a perversion of the action of the lower portion, why may it not do the same with the upper portion, and thus relieve many spasmodic affections the of larynxand appendages. Dr. Tunstall brings forwards a case where this effect resulted.—In a case where the sense of suffocation was extreme, and respiration exceedingly oppressive and violent, he prescribed a scruple of veratria to one ounce of simple cerate, and directed that a small portion should be well rubbed on each side of the cervical vertebræ twice a day. Although the attacks were previously rather frequent, she had not a single attack of consequence during its use.

This remedy may therefore on further trial, prove valuable in many other diseases of undue nervous excitability, or perversion of nervous action. (13.)

The tincture of Aconite has been used with success by Dr. Pereira, in almost all cases of neuralgia and chronic rheumatism where no particular fever or inflammatory disorder is present. Mr. Curtis gives some good cases to prove the value of this practice: from ʒ j. to ʒ ij. of the tiucture are to be rubbed into the part affected with pain, taking care that the fingers are not used for this purpose. In cases of painful affections of the nerves in any part, as about the hip, the scalp, the face, forehead, &c., this application will be found valuable. The sensation of cold, heat, and numbness is generally produced. (14.)

Many of our old remedies seem to be increasing in value from the way and the doses in which they are given; look for example, to the large doses of alum, zinc, silver, &c., which are given. The same may be said with respect to nitrate of potash, which, when given in very large doses by M.M. Gendrin and Martin Solon, has been found very efficacious in acute articular rheumatism. The mean quantity taken by each patient, daily, was an ounce and two scruples, and twelve ounces during the whole attack. The mean duration of the disease, from the commencement of the treatment, was eight days, and rather more than twelve from the period of invasion. But this is perhaps no better success than we meet with from calomel and opium,—and from colchicum; especially when the latter remedy is given according to the mode recommended by Mr. Wigan, of Brighton, (see Retrospect, No. I, Art. 4,) which, since the publication of that article, we have tried extensively and with surprising effect—and we have no hesitation in stating that Mr. Wigan's plan will be found one of the most satisfactory and rapid modes of cure in these cases with which the profession has hitherto been made acquainted. (16.) In this affection, M. Malherbe has used with success the cyanide of potassium, in the form of compresses over all the joints affected, moistened with a solution of this substance, (ten grains to the ounce of distilled water.) Relief was obtained in forty-eight hours in one case whch he adduces. M. Trousseau had previously used the same application, with success, in severe headache, which we presume must have been neuralgic. (88.)

The old method of treating hæmoptysis and other hæmorrhages of a similar nature, by bleeding and other such modes of depletion, seems now to be given way to nauseating doses of tartarized antimony and ipecacuanha, which produce nearly the same effects on the system as bloodletting—they produce a similar state of nausea, diminish in the same way the *vis a tergo*, and likewise by producing syncope, allow nature to close the orifices of the bleeding vessels by that coagulum, which is formed with so much more rapidity in a state of syncope and depression than when the system is vigorous or under a state of stimulation. This is a curious fact and will no doubt be found useful throughout the treatment of hæmorrhages of all kinds; and in future, instead of stimulation which we have hitherto almost implicitly relied upon in hœmorrhages during pregnancy, and in the puerperal state, we shall be led more and more to trust to syncope, cooling nutritious diet, and the effectual use of the plug, &c.—avoiding the too common practice of pouring brandy and wine down the throats of our patients. (17.)

Perhaps few diseases have been treated with more variety of remedies than has chorea, owing to the different views of its pathology, which have been entertained by different practitioners. Purgatives, tonics, and iron in particular, in one form or another seem to be chiefly depended upon. Mr. Wardleworth of Rochdale, has found the greatest good from purgatives composed of one-twelfth of a grain of elaterium, three grains of jalap, and two grains of ginger, given till free purging is produced, and regulated of course according to the age of the patient, the above being the strength for an adult. The use of the ammoniated tartrate of iron from three to five grains in any suitable vehicle, three times a-day may then be given with admirable success. (19.) Dr. Hennis Green generally employs one of the three following remedies in the Children's Hospital: first, the sulphureons baths; second, cold baths; third, the oxide of zinc. The sulphureous baths are composed by the addition of four ounces of the sulphuret of potass to a common bath; the patient to be kept in the bath from half an hour to an hour and a half, and it may be repeated once or twice daily. From fifteen to twenty baths were generally sufficient to remove the disease. M. Baudelocque of Paris, uses this remedy with great success. (36.)

The plesser and plessimeter as used by Dr. Burne will be

found an improvement. Instead of using the three fingers supported by the thumb to tap or percuss the chest as practised by Laënnec, he applies a piece of sole leather more than one inch in diameter and rounded at the edges, to the surface of the chest, and with another piece of leather attached in a particular way to the head of a small hammer, he strikes the piece placed on the chest, and thus produces a more regular sound than with the fingers. The less the force with which the degree of resonance can be applied, the better. (20.)

Dr. Bullock of Uxbridge, has published an interesting case of tetanus cured by tobacco injections. In this disease almost every remedy has been long since tried with but comparatively little success. In this case of Dr. Bullock's the tobacco glyster was repeated every six hours, composed of half a drachm of tobacco leaves to nine ounces of boiling water, and macerated for a quarter of an hour. The first three injections had no effect in producing the usual prostration; but the following times, this was the case, for at least two hours. In three days the disease began to give way, and eventually the patient recovered, although not without a severe relapse, in which the tobacco was applied every eight hours with the former success. While the tobacco glysters were thus given with fearful rapidity, the nervous system was fortified by tonics and stimulants. The strongest broths and jellies were at the same time given, as much and as often as possible. (21.) It seems that both tobacco and opium when administered in the form of injection take even a more powerful effect than when taken into the stomach. Dupuytren explains this fact with respect to opium, by supposing that in the stomach its effects become modified by the process of digestion, whereas when administered by the rectum it becomes absorbed, unaltered into the system. This is well illustrated in a case of nervous excitement, published by Dr. Maddock, in which the opium injection was used with remarkably good effects; and no doubt in many cases of nervous excitement, produced either by disease or by operations, this remedy would be found valuable. (23.)

One of the simplest and most efficacious remedies lately adopted is that by Dr. Wilson, in cases of colica pictonum. Instead of having recourse to the string of remedies usually adopted in these cases in order to procure an evacuation of the bowels, it will be well in future, where there is the opportunity,

to put the patient into a warm bath, and when he has been in it for some time cause him to introduce the enema pipe, and give himself a good injection with the water of the bath till he feels a sense of fullness of the abdomen: or the practitioner himself may perform the operation if the patient be not in a fit state to do it himself. In the case related by Dr. Wilson, the bowels were opened before the patient left the bath, and several times afterwards. Castor oil and a small dose of opium were given the next day, and the third day the bath and injection were repeated as at first: after this the patient continued easy and quite open in his bowels with sulphate of magnesia and the carbonate combined. (24.)

The effects of tartarized antimony in subduing inflammation of the lungs are well known to almost every practitioner; but we think the way in which this is accomplished is not so well known as it ought to be. Dr. Thomas Davis states that it always acts best when it produces no effect except upon the inflammation itself, i. e. when neither vomiting, purging, nor general depression are produced. The first dose may produce all these effects; but the second and third doses may be *tolerated,* and it is during this *tolerance* of the drug that its beneficial effects are chiefly perceived: if the vomiting and purging be excessive, it is well to combine a small dose of laudanum. Dr. Thomas Davis first bleeds freely in pneumonia; he then begins with one third of a grain of tartarized antimony in a little water, with a few drops of laudanum or syrup of poppies: he repeats this dose every hour for twice; he then doubles the dose for the next two hours; and goes on thus adding one third of a grain every two hours until he reaches two grains every hour. He has not exceeded this last dose, and has occasionally continued it for many days without injurious effects. Whatever be the modus operandi of this medicine there can be no doubt that this treatment is both judicious and safe.

Dr. Watson, who brings this mode of treatment more into notice in his excellent lectures, now being published in the Medical Gazette, recommends that when the inflammation has reached the second stage, that of solidification, mercury should be depended upon more than either bleeding or tartarized antimony. The system should be slightly affected as speedily as possible, either in the usual way by blue pill, or calomel, given at intervals of a few hours—or in the small and repeated doses

of the sixteenth of a grain every quarter of an hour; by which latter plan a patient will easily be affected by four or six grains of calomel. (25.)

Dr. Marshall Hall states that the seat of disease in the spinal marrow, accompanied with paraphlegia, is generally *at* or *above* the junction of the particular nerves which are implicated: and as these nerves do not pass obliquely but directly downwards at first, it follows that the practitioner may often mistake the seat of disease, and suppose that it is much lower than it generally is; the consequence is that he generally applies his setons, issues, leeches, &c., *below* the seat of disease: and it is Dr. Hall's opinion that it is best to apply our remedies directly adjoining the seat of disease, which is generally a little higher than is usually suspected. And he moreover recommends several setons of large size, instead of one only—he says to be efficacious, they should be three-fourths of an inch in breadth, and two inches long, and inserted on a level with or above the supposed seat of disease; and they should be four or six in number, two or three being inserted on each side of the spine. (26.)

The experiments of Dr. Edwards of Paris, respecting asphyxia, are already known to many members, though not probably to all, of the profession: and we have no doubt that it will require strong facts to induce the older practitioners to alter their mode of practice in resuscitating still born infants and adults: but such facts seems to exist. Dr. Edwards has proved that asphyxia takes place much sooner in a warm than a cool medium. He has found that new born mammiferous animals die most slowly in water at about 60° which is ordinary cold water; and that they die more rapidly as the water approaches blood heat. He advises that persons in a state of asphyxia should be exposed to the cool air, and that the application of heat should be avoided. Mr. Snow very ingeniously explains this circumstance by supposing that the deleterious effects of heat in suspended respiration depend on "its stimulating the capillary circulation, and thus promoting the de-oxgenation of the blood" in a more rapid manner than would be the case when the surface was cool; in other words when the surface is cool the capillary circulation is less energetic than usual, and consequently there is a preservation, in some degree, of the oxygen of the system. When we consider the great number of still-born children, some writers affirming that one child in twenty

are so, it is of the greatest consequence that a safe mode of practice be adopted in these cases, and we are strongly disposed to think, that hitherto, the practice of applying heat, and especially in the form of hot baths, is pernicious; for we must remember that the hot bath has not only the bad effects of heating the surface, but prevents that surface from being acted upon by the oxygen of the atmosphere, which it will be more or less when exposed freely to its influence. (27.) Dr. Scholer of Berlin, relates two successful cases in which the apparently still born children were immersed in cold water, the temperature of which however is not named in the English journal, but we suppose he experiment would be founded on the facts related by Dr. Edwards of Paris, and therefore, we take it, the temperature would be about 60°. (102.) Dr. Marshall Hall does not agree in this practice. Although he approves of the *sudden* application of cold to the warm surface as an effectual means of exciting respiration, he does not recommend the continued application of it. On the contrary, he says "That it is not the mere application of cold, but the *sudden* application of *cold* to a *warm* surface, which is the effectual means of exciting respiration. It is the *sudden alternation.* To apply cold to a cold surface would only be to sink the general powers of life. The infant should be kept warm; the warm-bath may be required; and then cold water must be applied, in moderate quantity, but with *force.*" He recommends what must strike every one as being a truly practical method of accomplishing resuscitation, namely, by exciting respiration by stimulating the exciters of that function, the *trifacial,* the *pneumogastric,* and the *spinal* nerves—the trifacial by *forcibly* blowing or dashing cold water in the face, stimulating the nostrils by ammonia, snuff, pepper, or the point of a needle, &c.; the spinal nerves by *forcibly* dashing cold water on the chest, thighs, tickling the sides, soles of the feet, and verge of the anus. (103.) M. Baudelocque states that since he has followed the opinions of Smellie, Scoret, Chaussier, &c. with respect to tying the naval string, he has not lost a single case from asphyxia. This opinion is to delay tying it for some time, when asphyxia is present; as the blood circulates for some time in the umbilical veins when it has ceased to be perceived in the arteries.

There is a curious case published by M. Breschet, of immediate contraction of the fingers after a wound, and puncture of

the nerve by the lancet. In this case electricity was found to relax the muscles, instead of increasing their action. A needle was passed into the back of the wrist: twenty-five to thirty pair of plates were employed, but the contraction seemed to be increased by this mode—the needles were next placed so as to act upon the flexors of the fingers, and to the surprise of all present, they were gradually extended under the influence of the galvanic shocks; the thumb alone remained flexed. Galvanism was continued for several days, aud with the ultimate recovery of the fingers. (33.)

Another remarkable case is related in one of the foreign journals, in which Dr. Carraro punctured the heart in a case of apparent death, with the hope of exciting it to reaction. The experiment was performed on a cat. It was kept under water till apparently quite dead, and after remaining in this state three quarters of an hour, without the least signs of reanimation, a needle was pushed through the heart: in five minutes it was observed to move, which shewed the heart had recommenced its action; it rapidly recovered. Dr. Carraro recommends this as a safe operation and trusts that it may be tried in cases of asphyxia. But we should certainly hesitate before we adopted such an experiment in the human subject. (34.)

Acute hydrocephalus is often so intractable a disease that we should be glad to find out some more potent remedy than has hitherto been discovered. Dr. Roesser gives us a case where he employed large doses of the iodide of potassium. The child lay quite insensible, pupils fixed and dilated, complete paralysis of one side, face flushed, body bathed in perspiration, and all the other symptoms denoting the last stage of the disease. One drachm of the iodide of potassium was dissolved in half an ounce of water, thirty drops of this solution were given every hour in a little water; one drachm of the iodide was at last given in twenty-four hours, and then the good effects appeared: in short the child rapidly recovered without any other bad effects than a crop of boils. (35.) In the administration of iodine, Dr. Mojsisovitz of Vienna, throws out some useful hints. Feculant matters decompose the preparations of iodine, giving rise to ioduret of starch in the stools of those who eat bread, potatoes, rice, gruel, and vegetables, while taking this medicine. It is necessary therefore to interdict the use of all substances

containing fecula while iodine is being given. This may account for the fact of such large doses of this medicine being occasionally given without either bad or good effects. Dr. M. disapproves of the tincture of iodine, which he says is more likely to cause a wasting of the testicles or mammæ, hœmoptysis, &c. than any of its salts. He prefers the hydriodate of potass, or the proto and deuto iodurets of mercury. He gives about fifteen grains of the hydriodate daily, which we think might be considerably increased without danger; his ointment for tumours is composed of two parts of proto-ioduret of mercury and twenty-four of lard. (40.)

M. James states that the good effects of electricity in cases of neuralgia are often lost from the improper way in which the remedy is applied. In the first place the needle ought to be of gold or platina, which are not readily oxidized; it should be pushed directly down to the affected nerve without being rotated as is often done in introducing a needle into the flesh; it should be pushed down so as to be in contact if possible with the nerve, although it is not necessary to pierce it: one needle should be introduced at the origin of the nerve, and another at the termination or at the part most affected with pain; a current of electricity is then made to pass from one end of the nerve to the other between the two needles, the positive pole communicating with the needle at the origin, and the negative pole with the needle at the termination of the nerve: a pile of five or six plates is generally necessary for the first sitting. M. Magendie is the great advocate for this mode of treating neuralgia. (43.)

The important observations of Mr. Ferral of Dublin, on certain structures of the orbit, besides those of Mr. Dalrymple in his work on "The Anatomy of the Human Eye," and those of M. Bonnet and Mr. Bennett Lucas, place in a new light many of the muscular actions and diseases in the orbit. Mr. Ferrall's attention was first directed to this subject by meeting with a case which bore some resemblance to periostitis, and yet there was no pain whatever on pressing that part; the eye at the same time seemed perfectly healthy. On further examination he discovered a distinct sheath around the globe, which protected it from the unnecessary action of the muscles, and through which there were small openings for the tendons to pass, and which openings were thus formed into so many pulleys, which enabled the muscles and tendons to act without the least pressure on the

globe. This structure had indeed been previously described both by Mr. Dalrymple and M. Bonnet, as well as in some measure by Mr. Bennet Lucas. Mr. Ferrall names it the *tunica vaginalis oculi*. The muscles are quite on the outside of it, and only send their tendons through the six small openings, which are found about half an inch posterior to its anterior margin. Its uses are admirable. It completely prevents all pressure of the muscles on the globe by affording beautiful pulleys, through which they can work so that the pressure will be chiefly on the pulleys: and if this tunic were not present, what would be the result when all the recti muscles act together: sudden pressure must necessarily be caused; and the eye would likewise be retracted, for it is difficult to imagine how the recti could rotate the eye without also in some measure retracting it. The existence of this tunic will likewise explain those diseases which previously could not be accounted for satisfactorily, such as rheumatic inflammation, when no evidence of disease of the eye itself can be detected, and when many of the symptoms of periostitis are absent. (58.)

The subject of club-foot has in general been so well entered into, that it is hardly necessary to dwell much upon it; nevertheless, the views and practice of Mr. Braid, of Manchester, call for some notice. His opinions, which differ in many respects from those commonly entertained, have been for some time before the public. When a tendon has been divided, and the two ends separated from each other, he has ascertained that these two ends re-unite by fresh tendon, or a substance very like it; and by this means a tendon may be elongated almost to any reasonable extent. He differs from most authors when he states that the best way is to divide all or most of the tendons which are implicated in the contraction; and in the course of four or five days the foot may be brought into its natural position and direction, without the trouble and pain of continuing the extension for the great length of time which often follows the simple division of the tendo Achillis. It will generally be found in a case of pure talipes equinus, with rigid contraction, that not only are the tendo Achillis and plantaris contracted, but also the flexor longus pollicis pedis, and the flexor longus communis, tibialis posticus, and peronœus longus and brevis. Mr. Braid would therefore divide the whole of them at the same operation, or at least those which he found contracted: and his

extensive experience warrants him in strongly recommending this mode of proceeding instead of dividing the tendo Achillis alone, and trusting to future long extension to complete the reinstation of the foot. It seems but reasonable that if other tendons are found proportionably contracted they should be divided as well as the tendo Achillis, especially as the operation is so very simple, and fresh tendon will almost invariably be found to unite the dissevered portions. This, indeed, would enable us to make short work of our operation and astonish our patient, but we should question the propriety of proceeding thus rapidly and almost violently in all cases of the kind. No doubt in many cases Mr. Braid's practice is admirable, for it must be remembered that the antagonist muscles are in a weak and almost paralysed state, and can therefore offer but little resistance when the lately extended muscles are again allowed to have play: the consequence will be that the club-foot will either not be completely cured, or the cure will be very tedious. After thus dividing all the contracted tendons, extension is to be commenced in two days, and in four or five days the deformity will generally be cured. In a case of varus Mr. Braid divides the tendo Achillis, tibialis anticus, tibialis posticus, flexor longus pollicis pedis, and flexor longus communis, and abductor pollicis, if required; and if there should be much contraction of the sole of the foot, he even divides the plantar fascia as well as the short flexors. But there may be other kinds of talipes, which are owing, not so much to contraction of certain muscles, but to paralysis or weakness of the antagonist muscles; and in these cases Mr. Braid seems to be the first who has excised a portion of such paralysed or weak tendons for the sake of uniting them again, and thus making them shorter. This has completely succeeded in many cases. It is necessary, however, not to cut out too much, which would produce rigid contraction, nor too little to excite the tone and contractility necessary.

There are cases of disease of the eye where cataract is present, but in which the usual operations for that disease would be unavailing, such as in those cases where the vitreous humour is so softened and melted down, that the lens will not retain its situation when depressed, neither would it be prudent to extract it as the vitreous humour would follow, neither can the lens be broken up. In these cases, Mr. Morgan recommends tapping

the globe through the sclerotica to diminish the vitreous humour so as to allow the lens to fall below the axis of vision. He does this by passing a large sized needle, with cutting sides, through the sclerotica about three lines distant from its junction with the cornea a little below its transverse diameter: he then draws the cutting edges vertically downwards, making an incision parallel with the corneal line of attachment of the sclerotica, and of about a quarter of an inch in length; if the vitreous humour does not escape, gentle pressure may be made on the globe, till sufficient escapes to allow the lens to sink below the axis of vision. (60.)

The elastic ligature made of caoutchouc, as recommended by Mr. Nunneley, will be found in many cases an important improvement; especially when the parts are required to be kept in certain positions without exciting irritation from undue pressure. Since our last notice of this subject in our former number, some further valuable observations and experiments have been made by that gentleman. A caoutchouc thread, if used without previous preparation, could not be depended upon as its elasticity varies so considerably,—but if previously heated in water at not less than 90° Fahr., it contracts to a certain degree, to one sixth or more or less of its original length according to its thickness, and always maintains this degree of contraction afterwards, unless stretched: and when stretched as by the sides of a wound it will indeed give way so as to relieve all unnecessary and hurtful tension, but will always endeavour to regain its original dimensions; so that nothing can be more adapted to accommodate nature in her varied operations: if, for example, a stump is rendered uncomfortable and inflamed from the tightness of the plasters or bandages, or ligatures, it would be great relief to gently remedy this tension, by partially slackening the plasters, &c. All this is at once accomplished by this elastic ligature, it is sufficiently firm to keep the parts in apposition, and at the same time gives way to the varied degrees of tension which wounds will occasionally be subject to. A ligature one-sixteenth of an inch in diameter, nine feet long, will contract to eighteen inches in a temperature of 90° Fahrenheit, and can be forcibly stretched to eleven feet; but on the extending force being removed, it will again resume the length of eighteen inches. By understanding this, the surgeon can always have a good idea how tight to draw his ligature; "thus if he expect

much swelling, he should only draw it so tight as in the first instance to merely maintain the parts in apposition; if, on the contrary, there already be much swelling, he should draw it rather tighter, in anticipation of the subsidence of the tumefaction." But so elastic is the contracted thread, that the tension is more likely to be too great than too little. This elastic thread may also be found very useful in dressing wounds where adhesive plaster cannot be retained: the parts can be examined without disturbing the elastic bandages, and fomentations and other applications can also be used without injury or displacement. (63.) M. Rigal of Gaillac, has been accustomed for the last two years to use bandages made by strips of indian rubber, in the place of common ligatures and bandages. He speaks very highly of their effect in those cases where it is necessary to keep the parts in apposition, and yet where those parts are liable to varied to distention and relaxation; in which cases it will be seen at once how extremely valuable this kind of application will be. He particularly mentions their utility in cases of hare-lip, and the operations for the restitution of lost parts. The elastic bandage will also be exceedingly valuable in maintaining oblique fractures of the lower extremities, in perfect apposition by accommodating themselves to the varied muscular efforts. (90.) While referring to ligatures and bandages, we may mention the improvement in the making of adhesive plaster, which is so ingeniously contrived by Mr. Liston, viz. the spreading of a solution of isinglass on membrane, consisting of the peritoneal covering of the cæcum of the ox, rubbed down and carefully polished in the manner in which the common goldbeater's skin is prepared. It has been discovered that isinglass forms a much more adhesive application than anything which we have hitherto used. It was formerly spread on oil silk, and may be so still for ordinary purposes, but in many cases it is a great advantage to be able to see the parts without removing the plasters; and in such cases the membranous plaster will be found invaluable, and especially when as little irritating as goldbeaters skin itself. Directions for the preparation of this plaster will be found in article 79.

The catoptrical exploration of the lens unfolds to us a new mode of examining the eye. If a lighted candle be placed before a sound eye, three reflected images are seen, situated one behind the other. The anterior and posterior are erect, the

middle one is inverted. The anterior is the brightest and most distinct, the posterior the least so. The middle one is the smallest. If the candle be moved the two erect images follow it; but the inverted image moves in the opposite direction. The anterior is produced by the cornea, the posterior by the anterior surface of the lens; and the middle or inverted image is from the posterior surface of the lens." We thus see how valuable this may be made in examining the eye in incipient cataract and other doubtful cases. If the three images can be seen as above described, we may be sure the lens is transparent and the impaired vision must be owing to some other affection than cataract; for cataract obliterates the inverted image and renders the deep erect one very indistinct. "Glaucoma only when very much advanced obliterates the inverted image, while in all its stages it renders the deep erect one more evident than in the healthy eye." In incipient cataract the inverted image is indistinct, and at last totally vanishes. This examination of the eye will be found of the most essential consequence in many obscure and incipient cases of ophthalmic surgery. (64.)

The French surgeons seem to have acquired greater skill than even the English, in treating syphilitic cases. From the great pains taken by Ricord and others they would seem at present to be taking the lead in the investigations on this subject. In treating a very recent case of gonorrhœa, and previous to any redness around the orifice or pain in making water, Mr. Acton states that the disease may frequently be cut short by the following method. In addition to the more common means, twelve injections of a solution of nitrate of silver, two grains to ℥ viij. are to be used in the course of forty-eight hours, at regular intervals. These injection are then to be discontinued and cubebs and copaiba are to be given. These latter medicines according to Velpeau are best combined in the proportion of one part of copaiba to two of cubebs, and with this Mr. Liston agrees in his last edition of the Elements of Surgery. Velpeau however seems to recommend a much stronger solution of the nitrate of silver than Ricord, stating that one grain to the ounce is about the proper strength: and this he uses about three times a-day; for about three days; if persevered in longer, it may produce a fresh irritation in the urethra. He recommends also that the canal be kept constantly compressed by means of small graduated compresses, dipped in starch, applied from the bulb to the fossa

navicularis, and retained by means of a bandage. It seems to us however more prudent to adopt the strength of the solution recommended by Ricord and Acton. (65.)

In the treatment of strangulated hernia various remedies have been used to produce that complete prostration of energy which is often so necessary to accomplish its reduction: but the preparations of opium have generally been omitted; bleeding, the warm bath, tobacco, tartarized antimony, &c. have generally been preferred. Dr. Bell and Dr. Davis have however brought some interesting cases before us which show the value of opium, either in the form of morphia or laudanum, in accomplishing the wished for prostration. Dr. Bell gave half a grain of morphia, and repeated it in half an hour, with the desired effect. Dr. Davis gave a teaspoonful of laudanum, and repeated it in two hours; this second dose was followed by complete prostration of the muscular system, dilatation of the pupil, and the easy reduction of the hernia. It seems that Dr. John Conolly suggested the remedy to Dr. Davis at the anniversary meeting at Oxford. (66.)

Irrigation or the operation of dropping or dribbling water on different parts of the body is well known. It is generally done by making a syphon of worsted or any other porous material, one end of which is placed in the liquid, and from the other end the water drops slowly on the limb or part to be irrigated. Dr. Macartney has invented a simple irrigating machine, by means of which this is accomplished with more comfort and cleanliness than has hitherto been effected. The limb is placed in a box made of zinc, something like a fracture box. "The water is carried in a flat tube, which at one end is connected with the reservoir, and the other end projects through a slit in the upper edge of the box. The tube contains a strip of coarse woollen cloth, which is broad at one end and pointed at the other. The broad end is received by the vessel that contains the fluid, and the pointed end either rests upon the dressings of the affected part, or is suspended immediately over them. The water is taken up by the strip of cloth and carried along it on the principle of capillary attraction, or in the manner of a syphon." The water is carried off through a concave bottom perforated with holes, from which a tube projects over the edge of the bed. (67.)

In the radicle cure of hernia Velpeau prefers the tincture of iodine as an injection, to all others. It has the following advantages: "a small quantity only is required, half an ounce to an ounce; it produces no ill consequences even if allowed to remain in the sac; it does not cause any serious injury if injected into the cellular tissues; and lastly, it is almost uniformly successful." The strength of the liquid is two or three drachms of the tincture to an ounce of water, and he has even used the pure tincture without injury. (68.)

In what the French call "tumeurs blanches," or white swellings, in which they improperly often comprehend scrofulous enlargement of the articular extremities of the bones, ulceration of cartilage, and disease of synovial membrane, M. Jobert has found the greatest benefit from an ointment composed of thirty parts of lard to four of nitrate of silver. If this be not strong enough, eight or twelve parts of the salt to thirty parts of lard may be used. This ointment is rubbed on the parts affected. (69.)

Burns have been treated most effectually, especially when superficial, by covering the parts with a lather of soap; the lather to be repeated several times as soon as the previous coating has been dried. This plan seems to protect the parts from atmospheric influence almost as well as most others which have been devised, and much more speedily and simply, since a shaving brush and box of soap may always be procured immediately. Vesication in superficial burns is prevented by the immediate application, and the suffering of the patient is relieved considerably in both superficial and deep injuries. We believe Dr. Williamson of Leith, has the credit of first using this remedy. (70.)

In our examination of the ear we have frequently the greatest difficulty in obtaining a minute inspection of the whole of the membrana tympani. Mr. Curtis has introduced into this country the speculum used by Gruber, which differs from that of Kramer and Itard, in having the handles so made that they can be detached from the shield, which can be left in the meatus by itself. By this means the surgeon can make use of both his hands and the speculum is a sure protection to the parts while the operator is manipulating. By the assistance of Gruber's lamp, which has a strong reflecting lens attached, by which the light is thrown powerfully into the passage and upon the mem-

brana tympani, the condition of the parts can be more accurately ascertained than by any other means hitherto adopted. Mr. Curtis also brings before the profession a very excellent composition for curing discharges from the ear, called lapis divinus, composed as follows: "Take of sulphate of copper, nitrate of potass and alum, of each sixteen parts, powder them separately, and then mix them well together: fuse them in a glass vessel in a sand bath, and add one part of powdered camphor; break the mass into pieces when cold." Mr. Curtis uses a solution, consisting of two drachms of this lapis divinus in one ounce of distilled water; a drachm of the solution being added to six ounces of rose or distilled water constitutes the injection, which he generally uses twice a-day. It is well to begin with a weak solution, and gradually increase the strength according to the effect. Thus used it acts as a mild stimulant and astringent. (72.)

One reason why the common immoveable apparatus applied to the fractured legs or thighs of children is almost useless is that it soon becomes quite saturated with the urine, and therefore is totally incapable of maintaining the fractured parts in apposition. This is well prevented by the application of oil varnish. The starch bandage is applied first, and when completely dry, a layer of the varnish is to be applied with a brush; the limb is then to be exposed to the air in warm weather, or to the fire in winter: another layer of varnish is applied in two hours, and this will completely protect the parts from urine for almost any length of time. The apparatus can easily be removed by placing the child in a warm bath. (75.)

Subcutaneous operations are not only useful in curing the different deformities of the foot, &c., but will now be especially attractive to those individuals who are possessed of crooked noses. By passing the bistoury under the skin at a certain distance from the union of the cartilage and bone, it is carried to the part where those two portions are united; the cartilaginous portion is then separated from the bone, the nostrils are stuffed with lint, the parts are brought to a more regular form, and soon unite. (80.) M. Petrequin has also found subcutaneous myotomy very useful in some cases of entropion, which he has occasionally found produced by a permanent contraction of the orbicularis muscle. (84.)

One of the most useful contrivances which has lately been recommended to us is the improvement of the common pessary, or rather a substitution for that disagreeable and painful instrument. Mr. Clay of Manchester, has invented a support for the womb, which we think will be likely in time to supersede the old round or oval pessary. The use of the common wooden or indian rubber pessary, and indeed of all such large bodies must necessarily keep the vagina constantly in a state of distention; and consequently there will be but little likelihood for the vagina, at least, to assist in permanently supporting the womb when the pessary is withdrawn: And moreover the common pessary is an exceedingly inconvenient instrument, and one which delicate females are very reluctant to make use of, independent of their inability to manage it. Mr. Clay's instrment consists of a coil of steel wire shaped something like a cork-screw, or like the circular springs which are used in spring cushions. On the end which is introduced up the vagina to support the womb, is fixed a caoutchouc ring a little larger in diameter than the cork-screw spring, and sufficiently large to form a good support for the parts: on the other end which is outside the body there is a small shield of wood or ivory, which by means of bandages attached to a belt round the body can be securely fixed to the vaginal entrance. By means of this ingenious contrivance we think the womb will be likely to be more comfortably supported than by any kind of instrument yet invented. The vagina will not be kept in a state of distention, and even this may assist in some measure to support the parts. The caoutchouc ring which is next the womb will admit the passage of the different discharges from the womb; and the elasticity of the middle portion will be well adapted to the varied degrees of pressure to which it will be subjected. There have been other instruments invented for supporting the womb in these cases, but which we have not seen noticed in any of the journals. One of these is made by the Messrs. Eagland, of London and Leeds. It consists of a circular strap or spring which encircles the body like a truss, from this another strap is brought from behind, over the perineum where there is a spring and pad so as to press regularly on the perineum, and is fixed by two straps in front. This instrument is made in a different way by Mr. Elam of Huddersfield: the pad which presses on the perineum is connected to the posterior and anterior pelvic

circular strap by straps containing springs, by means of which the perineal pad is kept in its situation. By this means of making continued pressure on the perineum the external aperture is considerably diminished: in this way the womb is prevented from prolapsing: but it is evident that this is only adapted to cases where the neck of the womb completely protrudes, whereas Mr. Clay's instrument may be useful in almost every stage of the descent. (98.)

Dr. Lawrie of the Glasgow Infirmary, relates an interesting case in which procidentia uteri was cured by the actual cautery in the following way. "The uterus being returned, Weiss's three pronged speculum was introduced and dilated, and the actual cautery freely applied to both lateral surfaces of the vagina, nearly as high as the uterus." This for a time completely cured the affection. It returned some time afterwards, and was again treated in the same way with the recumbent posture for a considerable time. It has not since returned. (105.)

Since the publication of Mr. Toogood's case of dropsy of the amnion, it behoves us to be more cautious how we proceed in supposed cases of dropsy during pregnancy. Some writers on midwifery do not seem to be aware of the fact that dropsy of the amnion may so resemble ascites as to mislead even an experienced practitioner: but when Mr. Toogood's case is pointed out it will no doubt induce great caution in performing the operation of tapping. This patient was suffering from general dropsy and dyspnœa, to such a degree that tapping seemed absolutely necessary: "the abdomen was distended to the utmost: the fluctuation could not only be distinctly felt, but absolutely seen, the parietes of the abdomen had become so thin." Pregnancy having been ascertained, Mr. Toogood hesitated to tap her, and preferred bringing on permature labour, which he did by puncturing the membranes with a male catheter; two fœtuses were expelled in due time with an immense quantity of water, ten or twelve quarts coming away with the second child. After this the abdomen completely subsided. (101.) Mr. Pretty, at the suggestion of the late Mr. Walford, teacher of midwifery, in the Aldersgate Street School, recommends the use of the tourniquet to restrain flooding after delivery. It is to be applied over the abdomen, so as to exert a sufficient degree of pressure on the womb. There are many cases of flooding which require

this continued compression of the womb: and it has often struck us that the womb has not only a power of contraction, but also a real power of dilatation, which it occasionally exerts quite independent of the distention produced by a coagulum. It often happens that the practitioner has satisfactorily compressed the womb, and feels it just above the pubes like a large cricket ball; suddenly there occurs violent flooding, and on examining the abdomen the womb is again distended; not invariably by coagulum as is supposed, for in that case the coagulum would be sooner or later discharged, whereas this does not occur, but the discharge is liquid as immediately after delivery. In these cases continued compression of the womb, with a cold cloth repeatedly dipped in cold water, and the exhibition of a large dose of laudanum, will invariably succeed: but the hand must not be withdrawn until the opiate has stopped the action of the womb, and when this is the case no more flooding will occur—the womb will *remain* contracted. In these cases it is a question whether secale is necessary or not; there seems to be no difficulty in producing contraction; the difficulty seems to be in preventing the dilatation, and this is most effectually accomplished in many of these cases, not by stimulating, but by staying the action of the womb when once completely contracted. It is necessary, however, carefully to discriminate between cases where there is actual want of contraction, (in which the secale is invaluable), and cases such as we have described where the contraction is perfect for a time, and an active state of dilatation succeeds. When the uterus has thus to be compressed for a great length of time, a tourniquet would be useful; but this we imagine will seldom be required except in very extraordinary cases. Mr. Pretty likewise alludes to the whalebone vectis, which is used so successfully by Dr. Conquest, and although not a new midwifery instrument, it is not generally known by the profession, and certainly not so much used as it might be in preference to more dangerous instruments. It is formed of a thin loop of whalebone fixed to a handle. The loop can often be passed easily over the occiput, and traction made effectually. (104.)

Some of the most troublesome and intractable cases which come under our notice are those of procidentia uteri; in which the woman will occasionally submit to any operation to be cured of her disagreeable malady. Almost every remedy has been in

vain tried in many of these cases. The actual cautery, though a severe remedy will often be successful when all other applications have failed. Cases where this was successfully applied are brought forward by Dr. Lawrie, of the Glasgow Infirmary. Weiss's three-pronged speculum was introduced and dilated, and the actual cautery freely applied to both lateral surfaces of the vagina, nearly as high as the uterus. Great pain was of course experienced, followed by other severe symptoms; the patients were kept recumbent for about six weeks. We need hardly mention that the contraction of the vagina is here made to support the womb; and this must occasionally give way, especially when previously over-distended by the use of large pessaries; and therefore in all cases of procedentia it will be well to make use of some kind of support, such as that recommended by Mr. Clay, previously noticed, which will not produce this relaxation of the vaginal parietes. (105.)

A remarkable case is advanced by Mr. Rawson, in which the woman is said to have been delivered without being in the least conscious of the event. The child was slowly and unintermittingly, but forcibly, expelled. This is chiefly valuable in a medico-legal point of view. (110.)

Dr. R. Willis has thrown new light on the intention of nature in the portal circulation. Why has she departed so singularly in this part of the body from the ordinary mode of circulation in general? There is no sufficient reason for supposing that the blood from the intestines contains more of the elements of bile than that from other sources; and moreover it happens that occasionally the portal system is found absent, and yet bile is contiuued to be secreted. Reptiles and fishes have actually a portal system of the kidneys, as well as one for the liver. It appears to be as Dr. Willis states, "a most admirable contrivance to economise arterial blood." Carbon, it will be remembered, is highly pernicious to the system, end therefore requires an extensive apparatus to get rid of it—the whole mass of blood must be passed through the lungs with great rapidity for this purpose: the superfluous carbon is thus "literally burned out,"—but urea and bile are not so pernicious as to require this hasty departure from the blood, and therefore only a part of the blood is required to be circulatad at a time through the kidneys and liver. If it had been necessary to supply so large a viscus as the liver with arterial blood for the

purpose of freeing it of the bile, it would have required a vessel "of the calibre equal to the sum of the vessels whose contents are finally collected into the portal vein." But nature proceeds more economically—she first makes use of the blood to supply and vitalize the viscera, and then sends it to the liver, where, although perhaps useless as a vivifying fluid, it is still able to yield the bile if subjected to the elective affinity of the liver. (111.)

The connection between malaria and the evolution of sulphuretted hydrogen from different localities, is strikingly pointed out in an interesting paper by Professor Daniell. He seems clearly to prove that the unhealthiness of particular places, as the western shores of Africa, and particularly where large rivers empty themselves into the ocean, is owing to the evolution of sulphuretted hydrogen, produced by "the decomposition of the sulphates in the waters by the carbonaceous matter of vegetables." So small a mixture as a fifteen hundredth part of sulphurretted hydrogen in the atmosphere, acts as a direct poison upon small animals, and produces very uneasy sensations on the human body. When in larger proportions its effects are still more remarkable, producing sudden weakness and all the signs of asphyxia. The fatal effects of a communication of the sea water with inland marshes, was observed by Signor Giorgini in 1741, exactly a century ago, on the borders of the mediteranean. Dr. Robert Hamilton of Lyme Regis, noticed the same fact in 1793. Dr. James Allen in his paper, "on some of the predominant diseases of the African islands," arrives at the same conclusions, without however giving the explanation which Professor Daniell does. It seems evident that wherever such decomposition goes on to produce the evolution of sulphurretted hydrogen, the dreadful effects of miasma will follow to the animal system. And it is highly satisfactory that Professor Daniell having so clearly traced the cause of this pestilential influence, has also directed us to the remedy, namely, *chlorine*. Chlorine and sulphurretted hydrogen cannot co-exist together. "Plentiful fumigations of chlorine would therefore infallibly prevent the deleterious effects." This ought to be particularly known in Africa and the islands adjoining its eastern coast, Madagascar, &c., and also in the unhealthy climates of the east and west, where there is frequently every facility afforded for the intermixture of the water of the ocean with the

immense quantities of vegetable matter washed down by the rivers and torrents from the luxuriant soil. (112.)

The stormy discussions in the medical circles of Paris respecting poisoning by arsenic, have not yet ended satisfactorily. Orfila has endeavoured to prove by a series of experiments "that arsenic may be taken into the stomach and produce death without any remaining in that organ after death, the poison having been absorbed into the system and deposited in the tissues; and that there is a peculiar tendency to pass off arsenic by the urinary excretion." M. M. Flandin and Danger have made a report to the *Academie des Sciences,* in direct opposition to this statement of Orfila, which will be seen in article 114: and again the *Academie de Medicine* in which Orfila's influence and authority prevails, have endeavoured to explain these seeming contradictions. (114.)

In one of the recent French Journals, M. Guérin relates a case where he successfully cured a case of hernia, by means of the subcutaneous operation; and M. Bouchet proposes the same kind of operation in strangulated hernia, by means of a special instrument introduced into the cavity of the sac, through the internal orifice, by means of a puncture made in the integument. "The instruments consist of a bistoury with a narrow blade and a marked *kelatome,* (a kind of lengthened and flat trocar gliding in its canule)." The puncture should be made at the point, where a ficticious line, drawn from the *antero-superior prominence* of the ilium to the *linea alba,* reaches the externe edge of the rectus muscle. The skin, adipose tissue, and aponeurosis should be divided with a bistoury. The kelatome should then be used, being directed inwards towards the pelvis." The other steps of the operation are related in article 115. We suspect that most English surgeons will not venture on this delicate and dangerous operation in this way, without being satisfied by ample experience that it is safe. It is working too much in the dark for those who have real regard for their patients, especially when we have already a tolerably safe operation for this affection, when performed sufficiently early. (115.)

BIBLIOGRAPHIC NOTICES.

A Treatise on the Nature, Causes, and Treatment of Erysipelas. By Thomas Nunneley, Lecturer on Anatomy, Physiology, and Pathology, in the Leeds School of Medicine, Surgeon to the Leeds General Eye and Ear Infirmary, &c. &c.

It is singular that on so important and prevalent a disease this should be the only monograph which we possess: for although the disease has been ably and repeatedly treated of in different publications, both by the physician and surgeon, no separate work seems to have been devoted to the subject. Mr. Nunneley has taken a much more extended view of the disease than has hitherto been done by any author with whom we are acquainted. He affirms that Erysipelas and Erythema are essentially the same disease, and no writers have clearly marked the distinctions between them. It is not exclusively a disease of the skin, the diseases which may be included in the term Erysipelas being Erythema, diffuse inflammation of the cellular tissue, puerperal fever, diffuse inflammation of the peritoneum and pleura, of the mucous membrane, of the arachnoid membrane, and of the veins and lymphatics. In the treatment of this formidable disease, we are struck by the conflicting opinions of the most eminent practitioners; some treating it almost invariably by powerful tonics, and others by vigorous blood letting, and antiphlogistic measures: whereas, "bearing in mind that which chiefly distinguishes phlegmonous from erysipelatous action, and probably determines why the one form of inflammation rather than the other is developed, viz. that in the former there is increased action with corresponding power, in the latter increased action without the power to act with,"—it is evident we must be guided by the symptoms which are present. Mr. Nunneley enters very fully into the treatment of the disease in all the varieties of ways recommended by the best authors,

viz. by venesection, tonics and stimulants, emetics, purgatives, mercurials, local bleeding, especially by cupping, leeches, punctures, and incisions, nitrate of silver, &c. &c.

Mr. Nunneley makes the following remarks on the treatment by punctures: "There is no part of the body, nor any stage of the complaint, in which punctures may not be practised with benefit; and in erysipelas of the face, when other methods of abstracting blood are extremely inconvenient, or, indeed, with the exception of leeches, quite inapplicable, they are very useful. The blood flows more freely from the face than any other situation, on account of the skin being thin and more vascular. I am accustomed to puncture in almost all cases of erysipelas of the face, which are at all severe, and not unfrequently upon the trunk and extremities. The comfort produced is often perfectly surprising. The pain produced at the moment of making the punctures is severe, but it is of very short continuance."

In conclusion we beg to recommend this work to the profession as being one of great value, not only for the originality of the matter, but for the immense number of references to the best authorities on the subject.

Practical Observations on the Injuries of the Head. By Wm. Sharp, F.R.S., F.G.S., F.R.A.S., and Senior Surgeon to the Bradford Infirmary.

This is one of the very few treatises published in the present day, the tendency of which is strictly practical. It is valuable not only on account of the number of excellent cases which are ably discussed by one of our ablest and most experienced provincial surgeons, but also on account of the judicious mode of treatment, which is invariably pointed out in the course of the volume. We transcribe the following remarks respecting the prognosis in cases of concussion, which ought to be impressed on the minds of our young readers in particular. "An attentive practitioner will always remember that slight symptoms coming on some days or weeks after the accident, brings with them a far more serious indication of mischief than similar symptoms occurring immediately on the injury being inflicted; and also that a patient who has suffered from concussion of the

brain, in any of its forms, must not be considered really safe until he has for some time remained perfectly well. Sir A. Cooper stated in his lectures, that "no patient is safe from the effects of concussion till fourteen days after the accident," that is I suppose when no symptoms, or only very slight ones have arisen; but I should feel it to be my duty to watch a patient for a much longer period than this before I could dismiss my feelings of anxiety about him." p. 66. We can only point out the volume to our readers as one which does honour to provincial surgery.

The Cyclopædia of Practical Surgery.—Article "*Intestinal Fistula.*" By Thos. Pridgin Teale, F.L.S., Surgeon to the Leeds General Infirmary, and Lecturer on Anatomy and Physiology at the Leeds School of Medicine.

When we say that the different articles in the Cyclopædia of Practical Surgery are of first-rate excellence, we cannot but comprehend in this eulogy the article on Intestinal Fistula, by Mr. Teale. Placed in one of the most extensive fields for the cultivation of practical surgery in the kingdom, not even excepting the metropolitan hospitals, he has availed himself of his opportunities. The aaticle in question will amply repay the reader's attention. We have only space here to direct our readers to this and most of the other articles in this excellent work.

The Physiology of Digestion, considered with relation to the Principles of Dietetics. By Andrew Coombe, M.D., Fellow of the Royal College of Physcians in Edinburgh, and Consulting Physician to their Majesties the King and Queen of the Belgians. *Second Edition.*

Although this work is as much if not more intended for the general reader than strictly for the medical, yet it is a work in which every medical man must take interest; it displays throughout exact knowledge of the laws of the animal economy, and is

a book which we can especially recommend to those who are commencing the profession. It will probably supersede most of those works on diet and digestion which have lately issued from the press, as it comprehends almost every piece of practical as well as physiological information which is to be found in the most learned works on the subject.

On the Remote Cause of Epidemic Diseases. By JOHN PARKIN, Fellow of the Medical and Chirurgical Society of London, and Graduate in Medicine of the University of Erlangen, &c. &c.

Mr. Parkin in this work advances theories which, however interesting and plausible, we should deem without sufficient foundation to warrant belief. He considers that epidemics and endemics have often their cause in a poisonous matter being extricated from subterranean reservoirs, and that it becomes innocuous where largely diluted in the atmosphere. He traces the ravages of cholera in the same line of the earth's surface from east to west, in which volcanic action has repeatedly been felt. He says, "it would also appear that the extrication of gaseous and other matter along the lines which marks the operation of volcanic agency, sometimes takes place slowly and progressively. If so we can account for the spread of epidemic diseases, and their extension from country to country, independent of contagion or human infection." This book contains many ingenious arguments and striking facts which are worthy of perusal, although the theory which Mr. Parkin founds upon them will not probably obtain the general belief of the profession.

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